Vol. XVIII, Second Series. ROCHESTER, N. Y., JULY, 1857. No. 7.

AGRICULTURAL QUACKERY.

Though agriculture and horticulture have attracted the attention of some of the wisest and best of men in all ages, yet it is only during the past twenty years that much progress has been made in developing the principles on which a judicious system of cultivation is based. Modern chemistry has thrown much light on the hidden laws of vegetable and animal growth; and the hundreds of patient investigators that are now busily engaged in studying agricultural and horticultural phenomena, are annually bringing out new facts, which serve as stand-points for further research into the unknown. The immense practical value of these investigations are readily perceived by every reflecting mind. The single truth that phosphate of lime, as found in bones, apatite, coprolites, and other minerals, can be rendered soluble by proper treatment with sulphuric acid, has already added millions of pounds to the agricultural wealth of Great Britain; and if the experiments of Lawes and Gilbert, which have already cost over *two hundred thousand dollars*, had taught us nothing more than the value and practical application of this single fact, the farmers of a single parish have already received enough benefit from the use of superphosphate on their turnip crops to pay the whole sum, and are annually reaping profits that would support the most richly endowed Agricultural College on the globe. If this one fact has proved of such great value, have we not good reason to hope that the extensive investigations which are being made in many parts of the world will develop facts of equal and still greater importance? Many intelligent farmers, however, look with distrust on all recommendations issuing from any source other than that of practical experience. That this distrust is a great hinderance to agricultural improvement cannot be doubted, but scientific men have themselves to blame, in a great measure, for this want of confidence on the part of farmers. They have propounded theories which would not stand the test of practice, excited hopes which have proved illusive, and recommended practices which entailed much loss on those who were enterprising enough to adopt them. The principal cause of these failures, is attributable to the fact that some of the more popular and leading scientific men left the slow but certain paths of experimental investigation, and startled the agricultural world by a series of the most brilliant and seductive speculations, that were confidently expected to revolutionize those systems of cultivation which had been the slow growth of close observation and practical experience. The result was, as might have been forseen, an entire failure.

The prejudice created in the minds of farmers by these unfounded speculations, is now gradually melting away before the rising light of true, experimental science. Many earnest seekers after truth have been quietly investigating the laws of vegetable and animal nutrition, and the number is annually increasing; numerous public and private experimental farms have sprung up in Europe, and before many years we shall have several in efficient operation in this country and in Canada. Scientific men feel the powerful influence of an awakening popular sympathy, and a brighter day is about to dawn on our agriculture.

There is, however, a dark side to the picture. The country is flooded with agricultural periodicals, and every county paper has its "Farmer's Column;" ambitious politicians traverse the country delivering agricultural addresses, and it appears to be the great aim of too many of these lecturers to tickle the popular ear with some new and plausible theory. Any one at all acquainted with the agricultural literature of the day, must be aware that, while it is not entirely destitute of wheat, the chaff vastly preponderates. It is in this mixture of error with truth, of crude speculation with inductive fact, that constitutes our greatest danger, and which, if not checked, will again bring agricultural science into disrepute.

We have been led to these remarks, by reading a paper on "Manure, Drainage and Irrigation," written by R. L. Pell, Esq., President of the American Institute, and which has been copied with high commendation by several agricultural papers. We cannot believe that the editors took the trouble to read over the article before copying and commending it. We would, therefore, call their attention to the following extracts:

"If the soil has but a small proportion of the phosphates in it, and a great quantity of the silicates, [silicates,] wheat will ruin it more rapidly than barley, *for the reason that a single crop of wheat will remove a larger portion of the phosphates than three crops of barley.*"

Now, the fact is that the same quantity of barley removes from the soil *more* phosphates than a crop of wheat. We make this statement on the strength of forty-two analyses by reliable chemists.

"If we grow plants that are not intended to go to seed, they will require no phosphate."

This is a great mistake. No agricultural plant

will grow without phosphates. Turnips, which are "not intended to go to seed," although they do not contain *as much* phosphoric acid as wheat and other cereals, "require" for their maximum growth *a greater quantity of phosphates in the soil than any other commonly cultivated crop.*

"The urine of man is much more valuable than that of the sheep, cow or horse, as it contains over eight per cent. of the phosphates, which are not found in the urine of other animals, except possibly the hog."

According to a large number of analyses made and collated by LAWES and GILBERT, the "urine of man" does not contain *half of one per cent.* (0.37) of phosphates; and the assertion that phosphates "are not found in the urine of other animals," is still, farther from the truth.

"A soil should never be idle—plant your crops keep the land from weeds, and depend mainly upon the inorganic compounds elaborated by nature for their success. You may rest assured that more attention should be paid to the inorganic constituents of crops than has been. As, for example, I prepared an inorganic manure for wheat, thus: to five pounds of silicate of potash in solution, add five pounds of bone-dust; when dry, incorporate with it fifteen pounds of common Turks Island salt, and thirteen pounds of plaster of Paris. This composition produced great results, not only in the yield of the grain, but in the beauty of the straw, which was thicker than a pipe-stem. I then added the following year to the same compound, twenty pounds of wheat bran, and ten pounds of the ash of wheat straw, and the production was enormous. If land was so manured, eighty bushels of wheat would result from an acre. I have grown, by another process, at the rate of seventy-nine and three-quarter bushels of wheat to the acre."

We cannot of course contradict this statement. Mr. P. may have obtained an "*enormous*" crop from such a dressing; but we have seen essentially the same manure applied, without any particular benefit. It is certainly absurd to suppose that "if land was so manured, *eighty bushels* of wheat would result from an acre."

"Last year I was desirous of increasing the bones of several calves, and not having sulphuric acid at hand to dissolve bones for that purpose, I tried an experiment with lime-water, that proved to be perfectly effectual. The bones were placed in a large iron kettle, filled with slacked lime in solution, and boiled four hours, reducing them to a powder, which was used with irrigating water on grass land from which the calves fed, adding to it the necessary amount of phosphate of lime."

However true it may be that Mr. PELL'S calves had plenty of bone in them, it is absurd to suppose that the process he adopted had anything to do in "increasing the bones" of the calves. In the first place, boiling the bones in lime-water would not dissolve them—and even if it would, there is not the slightest evidence that soluble phosphate of lime will increase the *proportion* of this substance in the grass; or if it did, that grass containing an unusual quantity of phosphate of lime would increase the growth of bones in animals feeding on it.

"Farmers often complain of long protracted drouths in summer; much to my surprise, as I glory in dry weather, because it restores the constituents of succeeding crops, and renovates the soil by increasing the mineral matters that have been dissipated by growing grain and occasional rain—and were it not for drouths, a barren waste would in time result. God thus counteracts man's thriftlessness by evaporating moisture from the earth's surface, and thus inducing lower stratums of water to rise by capillary attraction, which carry in solution soda, potash, lime, magnesia, &c., to the earth's surface, when evaporation carries off the water, and leaves these valuable substances for man's crops. I discovered this fact by having a sample of soil analyzed in the spring, when a mere trace of these matters was found; in the fall following, after a very severe drouth, a portion of soil from the same spot was analyzed again, and contained them all in very appreciable quantities—showing that they had been freed from their siliceous coatings by atmospheric influences."

Whether water ascending from the subsoil brings with it "soda, potash, lime, magnesia, &c.," or not, we will not undertake to say. The somewhat recent experiments of Prof. WAY, however, indicate that water percolating through a soil dissolves out far less of the elements of plants than had been previously supposed, and it is, therefore, probable that ascending water is not over-charged with these ingredients. Be this as it may, however, we have not the slightest hesitation in saying that no chemist in the world, by the most rigid analysis of the soil, can determine the point.

"If you wish to manure a field of potatoes advantageously, and produce remarkable results, use the manure of hogs *fed on potatoes.*"

Nonsense. The manure made by hogs fed on corn, or still better, on peas, would be far richer in those elements which experience proves are most required by the potato, and would produce more "remarkable results."

"Wisconsin, thirteen years since, produced forty bushels of wheat to the acre—now only twenty."

We should like to see the statistics. The average crop of wheat in Western New York, in her palmiest days, was never twenty bushels per acre.

"Thousands of acres in our own State might produce admirable crops, if their owners would analyze the earth, and add the missing requisites, which, nine cases out of ten, would be found to be lime, phosphate of lime, or potash."

The ingredients mentioned, and in fact all the constituents of plants, exist on all soils capable of producing a blade of quack grass or a Canada thistle. The soil may not contain them in sufficient quantity to enable it to produce good crops, but chemical analysis is incapable of determining whether it does or not.

CULTIVATION OF BUCKWHEAT.

BUCKWHEAT requires and receives but little cultivation. It is often sown on the roughest and the poorest of soils, and in favorable seasons produces good crops; yet, with buckwheat as with any other crop, good cultivation is usually the most profitable. A well prepared, mellow soil, is desirable. Even a little manure may be applied on poor land with advantage. We have seen one hundred pounds of guano, used on a light, dry, poverty-stricken hill-side field in Massachusetts, more than double the yield of buckwheat. "No crop," says an experienced writer, "will feel manure of any kind, or in any state, so quick as buckwheat."

In England, where, on account of the coolness of the climate, buckwheat is rather a precarious crop, it is frequently sown in drills one foot apart, and hand hoed; and some experienced farmers sow it in drills two feet apart, in order that the horse cultivator may be employed. In this country, and in most parts of Europe, it is sown broadcast. The quantity of seed per acre varies somewhat with the character of the soil and climate, and the purposes for which the crop is grown. When raised for seed on soil of medium quality, the rule is to sow about *half the quantity* of seed used in sowing wheat—say from three pecks to a bushel. The richer the land, the less seed is required, as a general rule; if too thick, on rich land, it runs too much to straw.

Buckwheat is very susceptible of cold. It must not be sown till all danger of the slightest hoar frost is past. The usual time of sowing, in this State, is the first week in July. If sown too early, say the middle of June, it is liable to blast; if too late, it is frequently injured by early autumn frosts. The seed should not be covered too deep. THAER mentions the curious fact, that he has found the use of the roller in covering the seed injurious.

An experienced German writer says: "The success of buckwheat is remarkably affected by the weather to which it is exposed in the several stages of its growth. In this respect it is more susceptible than any other kind of grain. It requires dry weather immediately after sowing, and springs up during the time of greatest drouth; but after putting forth its third leaf, it requires rain, in order that its leaves may be developed before the appearance of the flower, which soon follows. During the long time for which it continues in flower, this plant requires alternate rain and sunshine, to facilitate its growth and enable the flowers to set. The flowers drop off during thunder storms, or even on the occurance of electric phenomena unaccompanied by rain. Buckwheat is also incapable of withstanding violent easterly winds, which cause it to wither before its flowers are set. After flowering, the plant again requires dry weather, to bring all its seeds to maturity at the same time, and insure an early harvest. The success of buckwheat is, therefore, very precarious. It depends not only on the general state of the weather throughout the season, but also on the particular time which may have been chosen for sowing. A week earlier or later often makes a very great difference. Hence, those who wish to make sure of their crop of buckwheat, sow it in three or four separate portions, and at different times."

Buckwheat will not thrive on cold, clay land. On all the poor, light, sandy soils of the Atlantic slope, it grows with great luxuriance, when well put in and stimulated with a little manure. On such soils, buckwheat has been used to a great extent, and with considerable success, for plowing under as a green manure. The plant possesses many qualities which render it valuable as a renovator. It can be sown late in the season; requires little cultivation; is of rapid growth; will grow on the poorest soils, and, in fact, succeeds best on light, poor soils, which are destitute of the organic matter needed for other crops, and which the buckwheat, when plowed in, supplies in considerable quantity. Nevertheless, we think buckwheat will not enrich land so rapidly as clover, peas and other leguminous plants. Where these can be grown, we would never grow and plow in buckwheat solely for its fertilizing effect. On soils which are too poor to grow clover and peas, buckwheat may be employed for the purpose of enriching the soil in organic matter, and, by its judicious use, the land will in a few years be capable of growing clover, peas, &c.

Buckwheat is often sown on land infested with wire worms. Two crops, sown in succession, will sometimes starve out these pests. We should be glad of the experience of our readers on this point.

CUTTING AND CURING CLOVER AND GRASS FOR FODDER.

RED CLOVER is raised with much greater care and certainty in many parts of this country than in Great Britain, yet it is held in far less esteem as a forage plant. This is probably owing, in some degree, to the manner in which it is cured. In England it is never spread out, but is allowed to remain unbroken in the swath, to prevent the leaves from falling off, and after being turned in the swath, is put into small cocks, and afterwards into large ones. Cured without much exposure to the sun, it is sweet and green, and horses prefer it to English meadow hay. The objection so often made against it in this country, that it is dusty and induces heaves in horses, is seldom heard in England.

It is important that clover should not be too ripe. It should be cut when in full bloom. A few days' delay often injures the crop, as the flowering stems rapidly grow tough and unpalatable. We are aware that a less quantity of hay is obtained—in fact, it has been proved that there is a gain of ten per. cent. in weight of hay by allowing the clover to form its seeds before it is cut—but in this case much of the saccharine matter is changed into woody fibre, and the quality of the hay is impaired more than the increase of quantity will counterbalance. Clover may be allowed to stand without loss till the lower leaves show symptoms of decay, but it is better cut too early than too late, especially if the after crop is intended for seed.

If the weather is favorable, and the crop not too heavy, clover may be cured advantageously as follows: Mow in the morning, as soon as the dew is off; turn it carefully in the swath about noon, and put it into neat, small cocks before the dew comes on. When sufficiently cured—say in three days—turn the cocks upside down, when the sun is well up, and draw in during the afternoon. If the crop is heavy, and the weather cloudy, put it into larger cocks, and allow them to stand out a little longer. The operation of curing may of course be expedited by spreading out the clover as soon as it is cut, but there is considerable loss of leaves—the best portion of the fodder.

It is possible by chemical analyses to determine with much certainty the best time to cut hay so as to secure the greatest amount of nutritious matter; but the analyses which have been made afford no satisfactory information on this point. In the famous experiments of SINCLAIR, the amount of nutriment was estimated from the quantity of soluble matter in the various grasses cut at different stages of their growth. Such a method of analysis cannot give reliable results. Much of the crude, imperfectly organized matter of immature plants might be soluble, but no one will contend that it is nutritious.

More recently, the nutritive value of food has been estimated by the proportion of nitrogen it contains.

Mr. Lawes' experiments on sheep, pigs, &c., proves that this method leads to erroneous results. Up to the present time, therefore, chemistry has afforded us no satisfactory data for determining the best time to cut the various grasses for fodder, so as to secure the greatest quantity of food. We must look to the experience of practical farmers. Unfortunately, however, it is difficult to ascertain how far the recorded opinions of farmers on this point have been influenced by the statements of scientific writers. There is, too, some diversity of opinion on the point, though the majority of farmers appear to be in favor of cutting the grasses when in blossom. Undoubtedly a less quantity of hay is obtained, but it is said to be enough more nutritious to make up for this loss. C. L. Flint, Secretary of the Massachusetts Board of Agriculture, has published extracts from numerous practical farmers on this point. We will try and select out a few, as representatives of the whole.

One of the most intelligent farmers of Middlesex county says: "I prefer to cut grass when in blossom, because it will make more milk and more fat, and cattle prefer it to that standing later. It keeps them loose and healthy."

A farmer of Worcester county says: "When designed for milch cows, store, or fattening animals, I prefer to cut in the blossom, because it makes more milk, more growth, and more beef. For working cattle and horses, I cut about six days after the pollen has fallen, because it does not sour or loosen the animal so much as when cut in the blossom."

A farmer of Hampden county says: "We cut after the blossoms begin to fall, and before they have all fallen. It has more substance and weight cut at that time than if cut sooner—more sweetness and juice than if cut later."

A farmer of Berkshire county says: "Our rule is to cut hay in the blossom, as it is then in the best state for feeding—less woody and much sweeter than later, and leaves the roots in better state for a second, or another annual crop."

A farmer who prefers to cut all other grasses when in blossom, says: "It will not do to cut blue joint or fowl meadow till some of the seeds fall, as it will soon run them out."

A farmer of Norfolk county says: "We cut about the time the blossom falls. The grass is then at its full growth. If it stands much longer, the leaves begin to die at the bottom, and the grass grows tough and hard, and I think the longer it stands the less it will weigh when dried. If it is cut much earlier, it will shrink and dry up, and does not seem to have so much nutriment in it, and I have noticed that cattle will eat more in bulk than when cut at the right time." Another says: "The time for cutting depends very much upon the use you wish to make of it. If for working oxen and horses, I would let it stand till a little out of the blossom; but if to feed out to new milch cows in the winter, I would prefer to cut it very green. It is then worth for the making of milk in the winter, almost double that cut later."

A farmer of Middlesex county says: "I cut my red clover before the heads begin to turn brown. When the clover is quite heavy, I cut it when only one-half the heads have blossomed, because then cattle will eat all the stems. Clover is injured more by half when it stands long after blossoming than any other kind. I find my clover hay in the barn much heavier when cut quite early."

Mr. Flint says: "The replies from about one hundred and fifty towns, are that farmers prefer to cut the principal grasses, timothy and red-top, when in full blossom; red clover when about half the heads are in blossom; and swale grass before it is ripe, and generally before blossoming, if possible, so as to prevent it from becoming hard and wiry."

In regard to the best method of curing grasses for hay, there is also much diversity of opinion. We prefer to mow early in the morning, spread it out evenly and well as soon as the dew is off, and put it into small cocks in the afternoon and draw it in the next day. If the crop is light, it may sometimes be dried sufficiently in one day. In fact, in our dry, hot climate, hay is very frequently dried too much. We give a few extracts from Mr. Flint's Report, before quoted, showing the opinions of practical hay makers in Massachusetts.

A farmer of Berkshire county says: "If the weather is good and the grass not too heavy, we cut in the forenoon and get into the barn in the afternoon. If the grass is heavy and the weather not good, cut in the forenoon and turn over the swaths at night, and spread and get in the next day. I do not believe in drying hay as much as some do. If not quite dry, two or three quarts of salt to the load will preserve it, and it will be the better." Another in the same county says: "I prefer to cut hay in the blossom on a good hay day in the forenoon, and it is fit for the barn, if raked with the horse-rake, and care is used to turn it over and bring the green grass to the sun, by two or three o'clock in the afternoon of the same day. Much hay is spoiled by being dried too much."

A farmer of Franklin county says: "Timothy will dry sufficiently for me in one good hay day. I dry less and less every year. If there is no moisture on it, there is little danger of hurting after it is wilted."

Another experienced farmer of Berkshire county says: "My way of making hay is to cut when in blossom, in the morning, shake it out evenly over the ground, turn it over at eleven o'clock, and get it into the barn on the same day, if the weather is good. But if the grass is very heavy, I put it into cocks over night. I consider it made, as soon as dry enough not to heat in the mow. To get drier than this is an injury to the hay."

A farmer in Hampshire county says: "My method is to cut with the mowing machine, which leaves the grass perfectly spread. It is turned over between one and two o'clock in the afternoon, and while still warm, and before the evening dew falls, it is put into cocks. It is spread and turned the next morning, and at one o'clock is ready for the barn."

TO CLEAN CHESS OUT OF SEED WHEAT.

In the August number of the *Farmer* for last year, we published a method of removing chess out of seed wheat, adopted by our esteemed correspondent, John Johnston, of Seneca Co., N. Y. The process is simple and effectual, and its adoption cannot be too frequently urged upon wheat growers. We have received an article on the vexed question of "wheat turning to chess," from Mr. J., in which he gives an account of his method of cleaning wheat, and we are glad to be able to present it to our readers in his own words. Mr. J. says:

"Some twelve or fourteen years ago, two farmers and myself went to call on an enterprising farmer, not

fifty miles from where I now write. We found him sowing wheat. He quit his work, and politely showed us over his farm, out-buildings, &c., all of which were very neat and well arranged—showed us what improvements he had made by underdraining, &c., and asked us politely to stay to dinner, which we declined, as we had other arrangements. We accompanied him into the field where he had been at work, and I put my hand in a bag of wheat and took out a handful to look at it, but what was my surprise to find it full of chess! I said I was astonished to find a man of his reputation as a farmer sowing chess. He looked me right in the eye, evidently irritated by my abrupt reproof, and said, 'How the h—l would you help it, when it was there?' I told him I would blow it out. He looked up again, evidently a good deal irritated, and said 'Neither you nor any other man can clean it out.' He had a first-rate mill, and had put it four times through, and yet there it was; and he said he would bet me one hundred dollars that I could not clean it out. I told him it would not be justice in me to bet with him, as I had done the same thing so often that I knew I should have no difficulty in doing it; but if he would take a bag of wheat to the barn, if I did not clean out all the chess in going once through the mill, I would pay him five dollars for his trouble. He said 'done,' and took the bag on his shoulder and started for the barn; but before he got out of the field he threw it down, saying he had 'plenty of the same kind in the granary.' After going to the barn, I took the *shaking-rod of the fanning mill, and took out the riddles.* We carried the fanning mill into the granary, and I requested one of my companions to turn the mill steadily, not very fast, and not to stop until I notified him that it was all out of the hopper. I put in the wheat, and we run through about two bushels. The owner carried it to the barn floor, near the door, and all the three gentlemen got on their knees and examined it, and *they could not find one chess seed.* After examining thoroughly, the owner rose from his knees, saying, in a subdued tone, 'I see a man can never be too old to learn, and I have learned something.' I then said, 'Gentlemen you had better look behind the mill—*perhaps there was no chess in the wheat!*' The owner said he knew 'there was plenty of chess in it.' To make sure, I went and swept up behind the mill, and I should think I got at least four quarts of chess. The owner then said, 'Gentlemen, your horses shall go in and be fed, and you shall not leave until you take dinner. I have got paid for many dinners.' So we dined, and got an excellent dinner, and left without saying 'chess' again.

"I have never had the pleasure of calling on the gentleman since. I have thought I should like to see his wheat, to ascertain if he raised chess. I have seen him often since, but I never mentioned 'chess' to him, as I knew he felt a little grieved at his obstinacy in not believing me. I have been thus particular in making a long story out of a little matter, to try, if possible, to induce men to clean their seed, so that there may be no more 'wheat turning to chess;' but as long as chess is in your neighborhood, you are always liable to occasionally having a little. Your neighbors' cattle may get on your fallows when they have been eating chaff with chess in it, or swine when they have been eating screenings of wheat with chess in it. You may in this way get chess from their droppings, but still that will only be a trifle.

"Now, brother farmers, I beg you will try blowing the chess out of your wheat for a few years, and I know you will never again say wheat produces chess. I wish you, Messrs. Editors, would go up the Genesee Valley about seeding time, (I mean wheat sowing,) and see that they sow clean wheat. I know that some of the best wheat growers in the country believe wheat that is damaged by the treading of horses or cattle, or nibbled off close by sheep, geese or turkeys, produces chess. Now, I know they are mistaken. It is only because the wheat is killed, that the chess gets a better chance to grow. Those who sow chess, get chess; those who do not sow it, do not get it."

ITEMS SUGGESTED BY THE JUNE NUMBER.

Only thirty days to the 4th of July, and the apple trees but just fairly in blossom! Summer here, and the balance of the country's corn and potatoes yet unplanted! And every hour of *seasonable* weather improved! Heaven grant us "growing times" and late frosts, and there will yet be a plentiful harvest. While I rest from hoeing in "*my* new garden," let me note something of your June contents.

Ruta Bagas and Turnips.—The cultivation of roots, particularly if *successful*, prepares the land in the best manner for the following crop. *Success in root growing* requires high manuring, thorough tillage, and clean culture; it results in plenty of food for stock, and hence *plenty of manure*—with this, farming becomes profitable. If we are to have winter until May, American farmers should give increased attention to root crops; they will find them just the thing for spring feeding. A few beets and carrots, raised last year, were found of high value (*nearly* equal to their cost) for milch cows, by the writer.

A Proposed Rotation.—The third year in the course, is sadly blundered by wrong punctuation—it should read: "Wheat, with composted manure; rye: the spring following, beans, on any stubble unused for these; the whole seeded to clover, or clover and herd's grass."

Stirring the Soil in Dry Weather.—The advantages of constant culture are well brought out by your correspondents. I have found it easier to grow good garden crops in very dry, than in very wet seasons, by using the hoe freely. In wet seasons, it is almost impossible to keep down the weeds—in dry seasons, it is done with little difficulty—and the same rule and result hold good with our field crops.

Management of Bees.—The great trouble in keeping bees, is the use of new-fangled hives, bee-houses, etc., and want of common sense in caring for them. Give them plain box hives, an airy place, sheltered from the heat and cold, and a little "wholesome neglect," and they will be sure to prosper.

Butter Making.—My neighbor, T., gives many valuable hints on this subject. I know she makes the best of butter, but a little less "washing" would suit my taste, though the great care used in working leaves little chance for injury from that source.

Forethought in Farming.—It is a good idea to lay plans for work, but it is better to be able to change any of these plans in case of emergency. The farmer has great use for *forethought*, but cases come up frequently when the *ready thought* is called in play, and one who cannot turn back to first principles and plan anew, will be pinched sometimes pretty badly.

Farm House Cellar.—One of the most important *desiderata* of a farmer's home is a good cellar, and any reader who intends to build soon, will do well to study Mr. Larkins' communication.

Rearing Calves.—Our method, almost precisely, is that described by W. S., of Canada West. Of course, we think it one of the best which can be followed.

There are many other brief and excellent articles in this number, but time fails me for further itemizing. Since I commenced, we *have* had "growing weather," and farmers are thankful, and busy as need be. B.

Niagara Co., N. Y.

NOTES FOR THE MONTH, BY S. W.

Fallacy of Newspaper Statistics.—A Lowell hebdomadal says that the Bay State Mills, in Lawrence, manufacture 400,000 shawls yearly, valued at upwards of a million and a half of dollars, and that the mills consume 40,000 lbs. of wool per day, or 12,000,000 lbs. a year, requiring 3,000,000 fleeces. Now, as the Bay State Mills have only one hundred sets of cards, and 60 lbs. of fine wool per day being a fair average for a set, there can be only 6,000 lbs., and not 40,000 lbs., of wool manufactured there in one day. This is not the first exaggeration of Lowell's industry from the same weekly—strange as it may seem, when we reflect that Lowell is the cap-sheaf of a manufacturing town, and as such needs no puffing.

Transplant Beets and Sow Corn Fodder as a Second Crop.—Any one who, on the 4th of July, has beet plants the size of the little finger, will do well to transplant them in vacant spots, or on ground where green peas have been grown, and the soil forked over. If the month is not too dry, they will be as large on a good soil as early planted beets, because they grow in the fall long after the advent of early frosts. Two-thirds of the leaf should be cut off when transplanted. If dry and warm, set them towards evening, and pour on water that has had hen dung dissolved in it; they rarely require more watering—a little hoeing, to let in dew and atmospheric gasses, is better. Corn for fodder or soiling milch cows in the fall, may also be sown after peas are removed; but if we have a long drouth in July and August, it retards the growth of late planted corn as much as it favors the finishing and perfecting of the early planted. And as beets grow long after corn is chilled and stationary, they are more certain to pay as a late or second crop.

Excavate Draining Ponds in Flat Fields.—While on a short tramp across lots to Fayette, when the roads were impassable, in April, I encountered, in a large flat meadow, a pretty little artificial pond, filled with water from large open ditches; the pond was circular, not more than one hundred and fifty feet across, and about four feet deep. The *Deutscher* told me that it evaporated water very fast, even in cold, rough weather, and that the yield of his meadow was nearly double the last year—an untoward grass season, as farmers' stock this spring generally bear witness! Why are not more ponds excavated in the flat fields, and tenacious, stoneless alluvium of Western New York?

Late Planted Corn.—Some writers advise waiting until June to plant corn, lest the cold weather of May should rot the seed in the ground. I take it that any soil in which good seed corn would rot planted as late as the middle of May, would be altogether too wet to plant this ninth day of June, as more rain has fallen in the last twenty-four hours than in three weeks before. Let no man in the genial sections of Western New York omit to plant corn as soon as the soil is dry enough after the tenth of May; the notion that corn rots in a well underdrained soil after the middle of May, is ignored by continued experiment. I have corn and sorghum up and hoed that was planted on the tenth of May, although it was wet, cold and frosty for the next twelve days. Corn that is up on the first of June, luxuriates in a July and August drouth, if well tended, and the soil has been well manured; while corn planted on and after that day, will be pinched by the same drouth.

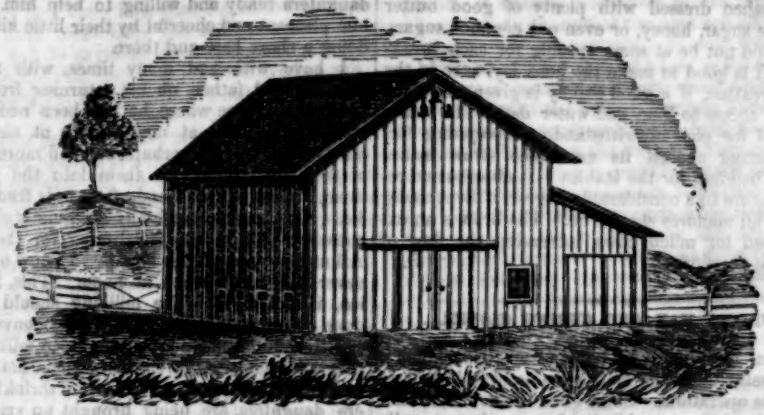
The Impolicy of Selling off Lean Stock.—We often hear of a city butcher fined for selling bad meat; methinks the day has come when those farmers should be fined who sell to our village butchers starved cattle and blue veal. It is found to be not only humane, but good economy, to add hasty pudding to a calf's mess, as two cents' worth for three weeks would make the veal white and fat. Some farmers say "there is no profit in feeding corn to stock." How much more profitable is it to let them become poor and worthless for want of food? John Johnson, of Fayette, feeds the whole of his always large corn crop to stock. He has paid at the oil mill here $1,200 for oil-meal to feed to cattle and sheep, within the last twelve months. He says it was the best investment he ever made—much better, perhaps, than those farmers have done who sold their corn at sixty cents a bushel, and invested the proceeds in Western lands. It enriches land amazingly to keep fatting cattle; while to sell off lean animals, is a sort of agricultural or chemical suicide.

The Blessings of a Grass Country.—I have seen large fields of corn at the West, and an extra large breadth of cotton at the South; yet I have been far more impressed by the evidences of rural picturesqueness, and true domestic comfort, in grass-growing Western New York—even in those high regions where corn is reduced to the early stunted variety, yielding barely enough to make the johnny cakes and fat the pork of the family—for here is creamed cheese, and clover-scented butter, and every other substantial article of food that the epicure might envy; fat, sleek cattle, fine wooled sheep, and laughing milch cows; with plenty of white clover pasture in summer, and the best of shelter and sweet hay (not straw) in winter. While at the South and South-west there is little cultivated grass, and less timothy and clover hay, with only the coarse, inedible corn-stalk, never saved; no shelter for cattle in winter from sleet and rain, and of course little butter in spring and summer, and less cheese. I have red clover this ninth day of June not yet in blossom, but heavier than I saw it, even in Southern Michigan, at hay harvest, and farther west it was still lighter.

Waterloo, N. Y.

Harvesting Carrots.—Grind a hoe sharp, and send a hand along between the rows to cut off the tops, while another hand, with a team, plows a deep furrow along side of the first row, close to the carrots; the next furrow will turn them out. Two boys, with a large basket, can follow, pick up the carrots, and put them in the wagon. When your carrots are harvested, the ground is fall plowed.

East Rodman, N. Y. H. H. Taylor.

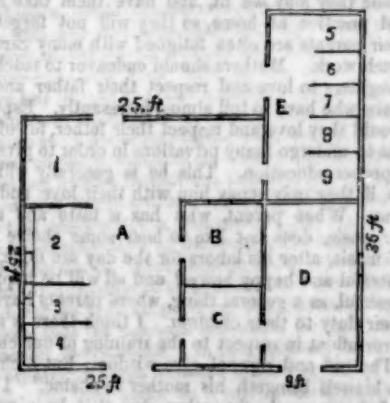


DESIGN FOR A CHEAP AND COMMODIOUS STABLE.

A CHEAP AND COMMODIOUS STABLE.

Messrs. Editors:—Having noticed for some time back that our agricultural journals, with very few exceptions, give nothing in the shape of stable plans, except those which are too expensive for the farmer in moderate circumstances to erect, I have been induced to send you the enclosed plan of a plain and convenient stable, which, as far as cheapness is concerned, can be erected by almost any farmer. Although I do not claim for it anything on the score of beauty, yet it has a snug and comfortable look, and, if erected in accordance with the plan, will not fail to give the animals occupying it the comfort and convenience they require.

The main building, containing the stable, grain and harness rooms, is twenty-five feet square, and



GROUND PLAN.

ten feet in height. It contains two single stalls, each five feet wide, and two double stalls, each seven and a half feet wide. The grain room, B, is seven feet square, and is lighted by a window opening into the stable, A. The harness room, C, is about the same size, and is lighted by a window in front. It has a door opening into the stable, and also one communicating with the carriage house, D. The carriage house is sixteen feet in length, nine feet in width, and ten in height, and will hold two carriages, (as many as the generality of farmers keep.) It is lighted by two windows on the side. Back of the carriage house is a stable for cattle, E, eighteen feet in length, and the same in width and height as the carriage house. It has a door leading into the barn-yard, and also one into the horse stable. It is divided into four stalls, each four and a half feet wide; or it can be used as a work-shop, or storage room for machinery, &c. The loft above the stable is six feet at the eaves, and twelve at the ridge.

The stable is constructed of wood. Over each crack a long slat is nailed, which effectually keeps out all cold winds. The large doors of the stable are hung upon iron rollers, which are fastened to the top and bottom of the door. Those at the top are constructed so that the wheels project from the door, and rest on a long beam fastened to the front of the barn. The lower wheels run on a groove, just below the surface of the ground. The doors move right and left, and thus there is no need of the long moveable pole which is generally placed in the centre of the doorway to fasten the doors to, and which is so unhandy to use. When the doors are opened, there is no slamming together by the wind. The other doors can be hung in this manner, or in the old way, as suits the taste of the builder. J. F. F.

CULTURE OF BUCKWHEAT.

Messrs. Editors:—This is the month to sow buckwheat, and, as it is much sought after during the winter months as a luxury, I think farmers will do well to cultivate a portion, however small, of their foul meadows, &c., with this grain. It will perform a treble duty. In the first place, we raise it as much for the crop, as any other which we grow. Next—a great desideratum—it will subdue blue grass, or other foul grasses, more effectually than any other means, in the same space of time. Wire worms will evacuate the premises on the first assault from it, and we can plant or sow any crop after buckwheat without fear of molestation from them, at least for a few seasons. It also leaves the land in fine tilth—more so, perhaps, than any other crop. These qualities, I think, are worth all the trouble and cost, even if we get a light yield.

Buckwheat is excellent for breakfast cakes, par

ticularly when dressed with plenty of good butter and maple sugar, honey, or even our common sugars. Who would not be at some trouble for such breakfasts? It is good to make the hens lay, even in the coldest weather, if a good supply is given, and they have free access to lime and water daily. It makes good feed for pigs, notwithstanding a prejudice formerly existing against its use. The straw makes excellent bedding for the stables. It absorbs and retains moisture to a considerable degree, if kept under cover, as all manures should be. The bran is an excellent feed for milch cows, increasing the flow of milk quite perceptibly. D.

Gates, N. Y.

CUTTING HAY AND CURING CLOVER.

Messrs. Editors:—As haying is approaching, it may be well to talk the matter over a little before we commence operations. Some good farmers think that timothy should be cut while in bloom; others, equally as good cultivators, are of the opinion that the seed should be nearly mature before cutting. There are arguments in favor of both of these propositions. My own experience is, that it should be cut neither too ripe nor too young. I think that hay holds its weight better if cut while the seed is in the milk, than at any other time; there is more nutriment in it than when cut in the bloom. If left until too ripe, there is in the stalks so much of woody fibre that more or less of the nourishing qualities are lost.

One word in regard to clover, which is very highly prized by English teamsters—so much so, that they care very little about "corn," while there is plenty of clover hay in the loft. Their method is to cut as the first blows begin to turn brown; never spread, but pitch into small cocks, say fifty pounds each, or what will make about that after being cured; leave it in this manner for a couple of days; then turn it over, and draw in. When cured in this way, we do not hear of so much dust—besides, the leaves are all saved, and they are the best part of the fodder, yet horses and cattle will eat the greater portion of the stalks, which they will not do if cured in any other manner, unless driven to it by starvation. D.

Gates, N. Y.

IS IT RIGHT TO ASK THE WOMEN FOLKS TO MILK THE COWS DURING THE BUSY SEASON?

[The following extracts from some of the numerous answers we have received to this question, will be read with interest.]—Eds.

I think it is quite right to ask the women folks to do the milking, or help do it, during the busy season. If farmers' daughters were all taught to milk, it would not be any detriment or disgrace to them, as a general thing; but, on the contrary, it might many times be an advantage to them and their parents. What farmer's wife, who feels an interest in her husband's affairs, has not witnessed how perplexing and wearisome his business is at many times, especially at that hurrying season, haying and harvest? The weather is frequently bad for curing hay and grain, and perhaps but little help, or that which is very poor, can be had. We ought, in such cases, to make ourselves very useful, for we know, if we but observe things as they are, that our husbands are tired enough at night to find the cows milked, or if they are not milked, to find them in the yard, and his wife and daughters ready and willing to help him, and make him pleasant and cheerful by their little kindnesses in doing a chore here and there.

I have witnessed many times, with regret, the husband and father, on his returning from town or some other place where he has been necessarily detained, go perhaps at nine o'clock at night to hunt after the cows, and perhaps not find more than half of them then; he drives them into the yard, milks them, strains the milk, and afterwards feeds the hogs, &c. All this time his family are quietly sleeping, unconscious of him who is laboring for their support. All men are not of this stamp. I know of some who never milk a cow when at home. This, in my opinion, is not right. The milking should not be all done by either sex, but as it is most convenient.

All children should be taught to milk as soon as they have sufficient strength in their hands to milk fast enough to keep the cows from shrinking. Farmers' daughters are being brought up very wrong in many respects. In the first place, they are not more than half dressed after they are two years old. In this way they are exposed to heat and cold, and, if they survive this usage, nine-tenths of them are puny children; and by the time they are seven or eight years old, (or ten at most,) they are placed on a stool to take music lessons, and, of course, their hands and fingers must be very limber to reach an octave on a piano. Mothers had better have them stand on a stool at the *sink*, and take lessons in dish-washing, and have them do all kinds of chores they are capable of doing, in doors and out. They should also be taught to knit their own and their brothers' stockings, mend and make papa's shirts, and piece bed-quilts, and, for aught I care, they may be taught embroidery, crotchet work, &c. After they are twelve years old, if their parents wish them to learn music, they should buy a piano or any other instrument of music they may see fit, and have them take lessons and practice at home, so they will not forget that their parents are often fatigued with many cares and much work. Mothers should endeavor to teach their daughters to love and respect their father and brothers, who have to toil almost incessantly. Especially should they love and respect their father, for often he has to undergo many privations in order to give them a proper education. This he is generally willing to do, if they only repay him with their love and kindness. What parent, who has a taste and an ear for music, does not like to hear some choice pieces of music, after his labors for the day are done, in his cheerful and happy home? and all will be happy and cheerful, as a general thing, where parents have done their duty to their children. I think there is a great error afloat in respect to the training of our children. "The rod and reproof give wisdom; but a child left to himself bringeth his mother to shame." I heard a father remark the other day, that he "supposed girls ought not to wash dishes when they were taking music lessons, because it made their hands stiff." He had been told so, perhaps, by his wife or daughters. Such a parent would not, of course, ask the "women folks" to help milk the cows at *any* time, let the case be ever so urgent, because it is instilled into his mind that they cannot, or ought not, to milk with their limber, white hands. Oh! what a pity that he does not let his judgment teach him better; children can play the piano if their hands *are* a little stiff, or colored with the sun's rays. Do not fathers like to see

their children look fresh and healthy? If they do, they should take them out into the open air, and set them at some light work, or they will never be healthy. Parents, let your children's hands get somewhat stiff, so that they may know how your hands feel at times; and also have them help you milk whenever it is necessary, and do anything else that you think is best for them to do, that they may love and respect you.

Jamestown, N. Y. A FARMER'S WIFE.

YOUR able correspondent, B., of Niagara County, asks for more light on this (to us dairymen, especially) important subject. If we do not succeed in imparting any light on the subject, we will at least have the pleasure of expressing our views, and of correcting some of the many errors into which your Michigan correspondent has fallen, in his or her premium article in the March number.

The essayist confidently asserts, that "woman's appropriate labor is strictly confined to the inside of the farm-house.' This false notion, which has prevailed to a great extent in our country for the last quarter of a century, is the primary cause of the early decay of American women. In Europe, where women perform a vast amount of the lighter kinds of out-door work, they are strong, rosy and healthy, with fully developed physical organizations, which are the admiration of sculptors and physiologists, and which contrast beautifully with our *pale, sickly, cadaverous, wasp-like, hooped* substitutes, for help-meets. If our country-women desire health and beauty, and to make themselves worthy of the respect and admiration of mankind—a blessing to themselves, their country and the world—they must imitate, to a certain extent, their Puritan grandmothers, who were worthy help-meets of the men. They cheerfully and sweetly bore their share of labors and trials; they were the housewives, spinners and weavers, tailors, nurses and doctors of New England. They were dairy-maids and cooks, as well as friends and sweethearts, in the good old primitive times. The young ladies of that time were not the *awkward, timid creatures* referred to by the essayist, who are doubtless like the city belle, who inquired of her country cousin how they obtained the milk—"if they took hold of the cows' tails and pumped it out!" The essayist's quotations from Scripture to sustain his or her false reasoning, reminds us of his sooty majesty's quotations to our Saviour on the mount, and we trust will be as effectually rebuked by all right-minded, industrious women. The women in Scripture times not only milked the cows, but tended the flocks, and some of the most eminent of them made love at the wells while drawing water for their flocks. (See Genesis xxix: 11; Exodus ii: 16.) Our Saviour informs us that it is not only lawful, but our duty, to do good on the Sabbath day; and again, that the Sabbath was made for man, and not man for the Sabbath. In this section, where nearly every farmer keeps from ten to sixty cows, the women folks (to their honor be it said) generally help milk, without being *asked*, and consider it a *shame* to those women who refuse to maintain their right to share in the labors and toils, the joys and sorrows, of their husbands, brothers and lovers. H. H. T.

East Rodman, Jefferson Co., N. Y.

I WAS not a little surprised to see such a question proposed as the one now before me—"Whether it is right," &c. If the question implies that the women should milk the cows without the men troubling themselves about it, I have nothing to say against it; but if it means the contrary, I am of a different opinion. I think it is the duty of the farmer's wife, or housekeeper, to see that the cows are milked, either by herself or by her servants. Woman was intended to be a helpmeet for man, and I do not know in what *better* way a farmer's wife can assist him, than by taking charge of the dairy. Farmers have so many things to attend to, that I think they can very well dispense with milking the cows; if they have a little time to spare, I think it could be better employed in the garden, which is *too much* neglected. Perhaps my views are owing to my education. In this part of the country, the women milk the cows. I was brought up a farmer's daughter, and am now a farmer's wife, and am quite content, while my husband follows the plow, to attend to the milking and manage the dairy. E. N.

Nassagiweya, C. W.

IN a farmer's family there should be no drones: and if there is more work out of doors than in, women should not object to milking cows, or otherwise lending a helping hand to whatever they can do. It only exercises the same muscles that are required in making lemon custards, or whipping Italian cream; and in no way will a young man be more impressed with a love of rural life, than to see his sisters taking an active part in the useful, as well as ornamental, work of an orderly, pleasant, attractive home.

East Groveland, Ohio. COUSIN ALMA.

IF favored with health, when man is actively engaged in their common good, woman should be willing to attend to her appropriate duties. If the barn-yard is properly cleaned, it will neither injure her dress nor person in the least. It is no more beneath her dignity to milk, than to do the work afterward attending upon it, for surely it is not more laborious.

Ballston Centre, N. Y. MRS. M. C. I.

LADIES, milk your own cows. It will improve your strength, increase your cash, improve your complexion, remove your pride, strengthen your digestion, and hopefully relieve your consciences.

Granville, Va. MRS. M. L. B.

WOMAN'S sphere of action is in the domestic circle; there, she may be frugal and industrious, investing everything with cheerfulness, and dispensing happiness on all. This makes a country home charming and attractive. If the women folks are obliged to milk during haying and harvesting, I think it would be better for them to consider milking their duty; then, perhaps, by practice, they may become fitted for that capacity. But when the busy season comes on, were a woman asked to leave her proper place and milk the cows, could she do it without neglecting her household work? Surely, all who have experience know the numerous cares of a dairy. But suppose she makes the attempt, what are the effects? She goes out, with a fluttering heart, among a drove of cows, who, perhaps, at the sight of a strange personage, will instantly present an example of perfect confusion. Here is a proof—the cows show by their *actions* that it is no place for a woman. And in

milking, she finds the hands she once supposed so strong, are weak, very weak, indeed.

Now I ask, has not a woman a busy season? Methinks there are few, at this enlightened age, who are ignorant of it, especially as it has been pictured in such glowing colors by the "lords" of creation. Would it not be unreasonable, as well as ridiculous, in "house-cleaning" time, to ask the *men* folks to get supper, and do up the dishes, because we had a piece of work to be done, (for instance, to finish papering or painting,) which must be done by Saturday night, and we are almost "dead" from fatigue? We doubt not you would say, "The world was not made in a day."

Now, you must not work so late; then you will have time to do *your* milking—for this is not women folks' work, any more than it is man's work to get the supper and do up the dishes during *our* "busy season." Neither can do this without neglecting their separate duties; the men are needed out of doors, and the women are needed in the house. Yet, if a women chooses to milk, then let her milk; but, from what experience I have had, I know there is seldom to be found a woman who thinks it her place to milk, though she may do it from necessity.

I am a farmer's daughter, and have had my experience in milking; and this I know, that the "busy season" comes quite often during the summer—and perhaps this is why I have so little charity. However, I shall never admit that it is women's place to "milk the cows during the busy season."

Onondaga Hill, N. Y. T M. W.

In answer to the question, "Is it right," &c., allow me to say that I am most decidedly of the opinion it is *not*, and will briefly give my reasons for so thinking: 1. If the "busy season" calls a woman to the milk-yard, will she not do the milking for the whole year? Of course she will; for industrious farmers find very little cessation in the labors of the farm. 2. Admitting, for argument's sake, that there are "busy seasons" for out-door workers, is it not correspondingly so in-doors? Most certainly it is. Then, of course, there is no more reason for women milking one season of the year than another. 3. A woman is completely out of her sphere in the milk-yard, with it wild cows and other unruly cattle, and its nasty and unpleasant covering. In short, milking is *man's* work, and ought to be performed by him, at *all* seasons. G.

Clearville, C. W.

BUTTER MAKING.

Messrs. Editors:—In writing upon a subject like this, upon which there are so many conflicting opinions, I shall do as I think duty requires, and that is, merely give my own. In the first place, I would remark that I think there are very few people who have been engaged in regular butter dairies, who do not understand the *main principles* of making good butter—that is, so far as attending to the milk and cream, and churning are concerned. But I consider there is a great amount of knowledge yet required by many, and by far *too* many, to teach them that when they have made a quantity of good butter, to stop the process in time to allow it to remain good until it can be taken to market and used. I think I hazard nothing in saying, that no person who ever ate a particle of rancid (called by some strong or frowy) butter, ever called it good. Now, all this rancid butter that is so much used by people who buy from the markets, (for the very good reason that they are generally troubled to get any other,) was once sweet, and probably very nearly all of it would have been pronounced by good judges to be good butter. Now, I have discovered the means of keeping it good, or rather allowing it to remain good, any reasonable length of time—say five years.

Now for the process. Be neat and tidy about your milking; milk twice in twenty-four hours, at intervals of twelve hours; set in middling sized tin pans, not over two-thirds full, especially in warm weather; have your milk room large and airy, and on the side or corner of the house from whence comes the prevailing wind, or draft of air, in the latter part of the day; have it shaded with trees, if you can. When you set your milk, be careful to set your fresh milk over the previous mess, if it be warm weather, (on the contrary if cool,) as the warmth of the new mess will often affect the old. Skim as soon as the milk becomes loppered, or thick. If the cream is not to be churned immediately, set it in pans in a cool place; if it is to stand more than one day, stir it gently each day a little. Churn it at a temperature of about 55° Fah., moderately, so that it will come to butter in from thirty to forty minutes. If it comes tolerably hard, churn it thoroughly after it comes, as it will take less time to work it; if it comes too soft to work conveniently, pour on cold water, and set it in a cool place until it is right to work. I have no objection to your washing it, if you can get out the buttermilk sooner, easier or cleaner by so doing—for if the water does the butter no good, it will be sure to do it no harm, and in warm weather it generally expedites the process. Now mix in evenly, and as quickly as possible, as much fine salt as will render it palatable for table butter, and no more (probably a trifle less) than one ounce to the pound. Then immediately pack it in a wooden tub or firkin.

I fancy I hear many, who have made butter for years, cry out, "Why, you have not told us to '*work it over.*'" Very true, and I now tell you *not* to "work it over," for this "working *over*" is the sole cause of ninety-nine hundredths of all this rancid butter in the markets. Take notice: I wish it distinctly understood, that in no case should butter be *worked a particle after the salt is dissolved*, (as the term "*worked over*" is generally understood,) and all the working that is done must be done before the salt is introduced, except barely sufficient to work the salt in evenly. This, to many, is probably a new idea, so I suppose I cannot reasonably get off without giving the reasons for not working it. There have been various ways tried to preserve butter with little or no salt. This is truly an age of invention, and I would not risk myself so far as to say that it cannot be prevented from becoming rancid by any process other than salting. This much I can say: it has never been done with any advantage to mankind; and further, I know of no reason why butter is not better, under any circumstances, with a moderate quantity of salt. Now, I am not accusing any person of not salting their butter; but the trouble is, they allow it to dissolve, and after it becomes brine, or pickle, they work it out again, for pickle is full as easy to work out of butter as buttermilk or water;

and here I would observe, that although pickle may be easily worked out of butter, it is impossible to work any in. Now, when you have worked this pickle out, the saving power is gone for ever. "Why, no!" many are ready to say, "after we work our butter over we generally taste it, and it is true we find it quite too fresh to be palatable for table butter, but we then invariably add another dose of salt, and then pack down." Just so; but look here, my friends —your first dose of salt has absorbed all the moisture in the butter, and it is now like any other oil, and will not dissolve any more salt; and dry salt in its granular state is not a preservative of any thing, any more than so many grains of dry sand—and I would nearly as soon have my table butter saturated with the sand as with the salt, provided the salt is not dissolved. The finding of so much dry salt in butter usually sold in the markets, is the reason why there have been so many ways tried to save butter without it. Pickle, or brine, is a *certain preservative* of butter, if left evenly distributed through it, in the manner it will be by the above process. As each particle or globule of brine will be in the position in which the salt was deposited, of course the finer the salt the better, as it will bring more butter in contact with the brine. The finer the salt, the *less time* should be occupied in working it in, as it will commence dissolving immediately. Now, if the butter is worked after the salt is fairly dissolved, these small globules of brine are displaced, and brought in contact with each other. The moment two or more come together they form one larger, and so on, and as often as they come to the outside they run off. Many, mistaking this for buttermilk, and having, very erroneously, got the idea that butter can be kept from becoming rancid, even without salt, provided that every particle of the buttermilk is worked out, they keep on working until they have deprived themselves of the only possible means of ever keeping the butter sweet. This butter has now become an oil, almost as perfectly as though it had been rendered so by heat; and I shall find few that will dispute me when I say, that no kind of oil (except some essential oils) can long be kept from becoming rancid.

I think there is nothing so good to pack butter in as wooden vessels. Many have tried stone crocks, but they are perfect conductors of heat and cold, whereas wood is not. Tubs with covers are the most convenient, on account of inspecting the butter by buyers; but when a dairyman once gets the credit of his dairy well established, the best way is to put it in firkins and head it up perfectly tight.

I think it will pay every butter dairyman well, who has eight or ten cows, to procure a press and make cheese through the hot weather. I have found it so.

South Rutland, Jefferson Co., N. Y. H. H.

BEETS AND CARROTS.

Messrs. Editors:—This article is a little out of season, but I trust it will do no harm. I have noticed many articles of late on the subject of beets and carrots—the manner of raising, their value for feeding, &c.—but still I judge, from the many inquiries made, that this branch of husbandry is not very well understood.

Analyses show these esculents to be a little inferior in nutriment to potatoes and apples, and much less so, pound for pound, than hay, but a little more so than turnips. Still, we cannot always tell precisely the value of an article for food by its analysis. The innutritious portion may act favorably, or unfavorably, upon the digestive organs. An occasional change of food is desirable, for man and beast. The substance of the body is made up of many simple substances, and scarcely any article of food supplies the whole in the proportions which the body needs them. I have heard persons condemn beets, because, as they say, they are not worth their weight in hay; and I have heard others say that carrots were worth more per bushel for horses than oats. Now, I have raised carrots (and generally beets, too) for feed, nearly every year for the past twenty years, and my experience is that no crops can be raised more sure to pay well on the investment. They should, of course, be fed on the farm.

Beets are liable to be injured early by insects—but much less so than turnips—and if not totally destroyed by them, I have never known them to fail of a fair crop. Carrot seed is a little liable to fail, from causes which are not well understood, but I am satisfied that it is not always the fault of the seed; they are, however, seldom or never injured by insects. They will *both* grow in almost any soil not too wet, but thrive best in a deep, dry loam. There is less danger of sowing them too thick than many imagine, though they may be so thick as to diminish the yield; but analysis and experiment show small ones to be worth more by weight than large ones.

The greatest enemies to these roots are weeds; and the great secret of success in raising them, is to keep the weeds down. To do this economically, they should be sown at a time when they will be likely to come up quickly, and, as soon as they appear, the ground should be stirred about them to keep the weeds back. The *rationale* of this is, that different plants require different degrees of heat for vegetation; most grasses and weeds will vegetate at a lower temperature than beets or carrots — consequently, they are very apt to get the start, if the temperature is too low for the beets and carrots. Then, there is a great difference in plants as to their hardiness and tenacity of life, and, if planted together, the strongest and most hardy will run out the weakest. Every one knows that buckwheat will exterminate many weaker plants. Beets and carrots, (especially the latter,) on their first appearance, are very feeble, and, if not protected from their more hardy neighbors, will surely be run out by them, or so enfeebled as to be worthless; but give them ten or fifteen days the start of the weeds, and they will take care of themselves as well as corn and potatoes. To raise these roots economically, they should be sown at a proper time, on a deep, well pulverized soil, in straight, true drills, so that, on their first appearance, the hoe can be passed rapidly, close to the rows; what few weeds are then left in the rows can do little harm, and may be pulled out, with little trouble, later in the season.

The great difficulty is, that farmers, in their first experiments, expect too much from these roots. My own opinion is, that they are very healthy and economical food for cattle, horses and sheep, but that it will not do to rely upon them for fattening, or even for sustenance. They should be fed with hay, stalks or straw, and not too many at a time, especially at first. If any one expects them to be as valuable, per weight, as hay or grain, he is very foolish, as he may know by experiment that from 600 to 1,600

bushels of carrots, and about two-thirds as many beets, may be raised on an acre. They will better compare with pumpkins in nutriment, but have the advantage of a greater yield, and are longer keeping.

With turnips, I have had less experience. I think them economical, but they are less sure, less palatable, and less productive, and, for cows, objectionable on account of the flavor they give to the milk and butter—but they are more hardy, and require less care. Cattle should never be fed enough of these roots to destroy their appetite for hay or corn stalks; if they are, you may expect them to grow poor. My breeding cows were fed less than a peck each, per day, the past winter, with hay once and stalks once, per day, and on the 15th of March were fair beef; but, like most of my neighbors, I did not calculate for so late a spring, and they lost flesh in April and May, for want of their full feed. AGRICOLA.

Gorham, N. Y.

SOWING WHEAT AFTER BARLEY.

MESSRS. EDITORS:—I understand a great quantity of barley is sown west of the Genesee River this season, and suppose many intend sowing the barley ground with wheat next fall, as the farmers in general did in all the counties east of them after the advent of the wheat midge, hoping that, from the two crops, they might get pay for their labor. But, in my opinion, they were only making bad worse. The true way would be to seed heavily with clover along with the barley, and then give the land rest for two or more years. There is not a farmer in the country, who, if his horses or oxen were so exhausted by hard work that they could not do a day's work in ten hours, would be so cruel as to make them work thirteen hours to make up, and that, too, day after day. No; they would give them rest, and feed them well, so that, after a time, they would be enabled to perform their usual labor. Now, if farmers would do the same by their land as I know they would do by their horses and oxen—or rather if they *had* done so by their land—no county in the State would have been obliged to give up the raising of wheat But the truth is, the land was worked more and longer without food than it could endure, and at last it gave out producing the great staple of our country. Every farmer knows that if he keeps his cattle, sheep and horses poor, they become overrun with lice, and so it is with the human species. I have always observed that *animals* and *vegetables* need the same kind of care—that is, they both require to be *kept clean* and *fed well*—and then they will both look well, and both do all that can be expected of them; and I have no doubt that, if the land had been properly fed, and not overworked, the cry of weevil, or rather midge, would not have been so long, or so loud, at least. This is my candid opinion. Now, to sow wheat after spring crops, is making matters still worse. The business of the farmer ought to be, to improve the condition of his land, by rest and good food; and the land only asks the refuse and filth of his farm and yards for food. And if every farmer would only prefer a load of good manure to a dollar, and would give the land more rest, with a good covering of grass when resting, my word for it, you would soon see a different state of farming. Far better feed *ten* acres to raise three hundred bushels of wheat, than to starve *thirty* until they can only raise the same amount. Now, this can be done. *I do it;* and I know what I can do, *others* can, if they try. But you will hear many say, "My land is rich enough—I get plenty of straw, but the weevil takes the wheat." But the land is like the starved sheep and cattle; the skin and bones are there, but the lice, together with hunger, have taken the flesh—so the straw is left on the land, but the lice have taken the wheat. Farmers, drain your land, and put all your manure on one-fourth the land you formerly did, and, if your land is a natural wheat soil, you will have paying crops of wheat. Give the remaining three-fourths of the land rest; stock it lightly with cattle or sheep, and it will make them fat, and the land will be getting fat at the same time. *I know it will*, and there is no arguing against experience, if the experiments are thoroughly made.

Letting timothy get ripe is a great scourge to the land, and I would rather have good straw, for either sheep or cattle, than have timothy cut, when it is seeded on mowing land. When the grass is cut while green, I think it does not impoverish the land much. But farmers must have hay, unless they feed largely on grain. I am convinced that I can keep any kind of stock better, and far more profitably, with part grain and part hay, than with either separately. Such is my experience, after many years of trial. It is over thirty years since I commenced feeding grain to all my stock during the winter, or oil-cake, which is as good. In that way I feed my land—and it has been *very grateful*, for it has repaid me bountifully.

Near Geneva, N. Y. JOHN JOHNSTON.

THE ADVANTAGES OF SYSTEM IN FARMING.

SYSTEM seems to have been the great aim of the Creator. Eyes that see, and minds that reason, discover and admire it in the heavens above us; minds that philosophise, discern a geological *system* below us; the school-boy learns the system and harmony of bodies, animate and inanimate, around us. The system of the upper world is such, that the deviation of a planet a single hair, in each turn of its accustomed round, would, long ere this, have created the wildest disorder and the most lamentable results—a collision of worlds would have been the fearful consequence. The creeping babe loves order; see the system as he arranges his marbles in squares. GOD gave the wild bird an instinctive system, with which to build her nest—the beaver to build his dam—and the fox to dig his hole. Why, then, shall we not wonder to see the farmer so loose and unsystematic in his *modus operandi?* It is to be deeply regretted that many of my brother farmers convert the enchanting face of a beautiful mound—that which *might* be an earthly paradise—into an Egyptian ruin, as the serpent of the Garden of Eden converted that blissful garden into a scene of misery.

Farmers, let me address you with all the power of a sincere and earnest tongue. Do you not all see wherein you can improve your system (or rather *want* of system) in farming? Is it not policy for you to exercise those God given qualities of taste in the arrangement of your buildings, the grading, seeding and cleanliness of yards, the building of fences, &c.? Do you not wish to delight the eyes of the passer by? When we see a farm house surrounded by tasteful barns and other buildings, we can but consider them typical of the general character of the proprietor.

Agriculture is as old as the oldest time. The

highest powers of created intellect have given us the jewels of experience, handed down to us by the long arm of the past; leaves of antiquity have been lain before our eyes by the chronicler. Shall we not heed when they counsel? Shall we not emulate their example? Shall this raging age of artistic progress, and scientific research, see the cloak of apathy upon the shoulders of the agriculturist? I will answer affirmatively, unless his duties and labors become systemized. A general system of agriculture is among the greatest wants of this era. Agriculture is a precocious science, with gray locks surrounding a boy's intellect. There is a wonderful development locked up in this science—that development accomplished, and we shall see agriculture reduced to a general system, extending at least over a tract of country consisting of a homogeneous soil.

There are at present nearly as many different methods of farming as there are farmers. Now, no one will deny that general principles, deduced from *facts*, should be regarded and adopted. No one will dispute the assertion that every plant contains the four elements—hydrogen, nitrogen, oxygen and carbon—and that unless a certain soil possesses all these attributes, it will not generate grains. This leads me to suggest the policy, and vindicate the propriety, of establishing more Agricultural Schools, thus giving agriculture the merit it has so long deserved—a systematic development. Our sons should be thorough masters of agricultural chemistry. Then we should not see—as we now often do—a sickly field of barley, striving vainly to mature on a heavy bed of clay, where the hand of ignorance strewed it. We should not see so many oats weighing twenty pounds to the bushel. We should not see so many potatoes resembling marbles and puff balls. Give us a scientific *system*, and these difficulties will disappear. The traveler will then be able to feast his faculty of taste upon the loveliness of nature, beaming forth from among the artistic polishings of the systematic farmer.

A want of system is symbolical of ignorance Many of our loveliest vales and grandest table-lands are converted into African deserts. What a *shame*—yea, what a SIN—to destroy the only means by which the inhabitants of the earth are kept in organic existence. The soil of this earth may be considered the great salvor which is served out to eight hundred millions of persons; and how amply would the platter be filled—how much more beautifully would life be enhanced—if each tiller would bring his wisdom into a systematic focus.

I have not space to particularize, but I do claim indulgence while I expose some few faults sequent upon a want of system. Brutes, like ourselves, are subject to frigid intensity, and when the mercury shrinks to thirty degrees below zero their suffering must be excruciating, when kept in some of the old, rickety barns, which have a ventilator to every plank, board or shingle, standing, perhaps, alone, on a chilly, bleak elevation. The nicest skill of the mechanic must be employed in building and arranging habitations for *our* comfort, while the brute must be given the very generous opportunity of a *hardening process*. Could the brutes speak, they would call for a *system* in the arrangement of their buildings, so as to form a complete enclosure, bidding defiance to the raging winds of our latitude; they would ask you to double board your barns, to line the floors tightly, &c. The indubitable fact that your cattle will require much less food, ought to have a strong pecuniary influence. If you have a heart that throbs for animal suffering, then let a moral prompting incite you to the means of prevention. Finally, if you are a *man*, and desire to do right in every action, remember that the best way to do *all things*, is the *systematic* way.

GEORGE W. CAMPBELL.

Pinckney, Lewis Co., N. Y.

FARM ACCOUNTS.

MESSRS. EDITORS:—Nine years ago I commenced farming for myself, and from the first resolved to know just how much I should gain or lose by the business. Friends predicted that I would soon get tired of keeping an account with my farm, and abandon the attempt; but I have persevered, for nine years, and do not now feel inclined to change for the ordinary loose way in which farmers conduct their operations. Being unacquainted with book-keeping, I adopted a plan of my own, which I have improved from year to year, in accordance with the suggestions of experience.

In keeping an accurate farm account, we first want to ascertain what is justly chargeable to the farm. As a general rule, it should be charged with all those expenses that are caused, directly or indirectly, by the farm—the interest on its cost, the depreciation in its value, (if any,) the real estate taxes, the interest on and wear of implements, the seed, the fertilizers purchased, the labor of men and teams, always including board, &c. The farm should be credited with the value of all its products, pasturage included.

I have not attempted to keep an account with my kitchen garden, as that, for obvious reasons, would be almost impossible. I think the best way to manage that, is to credit the farm the amount for which your house and garden would probably rent.

At the beginning of every year, the farmer should take an inventory of his stock and farming utensils, and enter it on his farm-book at the commencement of the year's account. When balancing his account at the close of the year, he should charge the farm the interest on the cost of utensils, the cost of repairs, and the wear of utensils. The amount to be charged for the wear of implements may be arrived at with sufficient accuracy in this way: let him estimate the number of years any implement will probably last, with the wear to which it will be likely to be exposed on his farm, and assess a just proportion upon each year. For example, supposing a plow cost eight dollars, and will last four years—the annual charge for wear would be two dollars. The interest on the portion unpaid, and the expense for repairs, should likewise be added.

To keep a debit and credit account with the farm, two account books will suffice—one, a day-book, or journal, in which should be entered, every evening, the nature and value of the day's labor, thus:

May 1st.—To 1 day's work, self, sowing oats, (six acres,) on lot No. 4, containing ten acres,		$1.00
" " 1 day's work, A, dragging in oats,		75
" " 1 day's work, team, " "		1.00
" " 12 bushels seed oats, at 50 cents per bushel,		6.00

At the end of the week, copy the value of the week's labor, seed, &c., in your weekly book, or ledger. The products may be credited when harvested, at the market value at home.

At the end of the year, you have a plain record of your operations before you, from which you can collate such tables as you wish. You can know the profit or loss of the whole farm, and also of every crop; you can know the cost of every bushel of grain, fruit and vegetables—the value thereof, and the resulting profit or loss.

But the intelligent agriculturist will not stop here. He will wish to make experiments, and keep a careful record of them, and all the attending circumstances and results. In this way he may be acquiring knowledge from year to year, which, if he is liberal, he will be ready to impart to others, through the agricultural journals. The judicious farmer will keep other accounts besides these, which I will not stop to indicate.

So you perceive, Messrs. Editors, that the farmer has opportunity, in his own vocation, for the vigorous exercise of his intellect, which he will find a certain antidote to that stupidity, that rust of the mind, to which farmers, as a class, are so much exposed. It keeps him in the practice of writing and composing, both of which farmers too generally neglect. If young men, who have received a liberal education, and have chosen for their vocation the noble and honorable one of cultivating the soil, would apply their intellect to their business, I am certain they would find it much more attractive, and better calculated to develop the spiritual man—which is the great end of life—than is generally conceded.

Near Palmyra, N. Y. P. C. Reynolds.

BENEFITS OF AGRICULTURAL FAIRS.

Messrs. Editors:—No fact is more apparent to the reflecting mind, than the immense benefits Agricultural Fairs have contributed to our material prosperity. They have contributed more to our vigorous growth as a nation, than all the gold California can pour into our country for ages. They have awakened a spirit of inquiry in the breasts of thousands, who have elaborated and made known their experience to the world—through the Agricultural Press—contributing their experiments to the general stock of information (which at best is made up of atoms) garnered together,—a rich legacy of facts, from which the principles of *Truth* shall be deduced by the hand of the future historian. All this has been done quietly. The silent step of agricultural progress has not been noted by the world—as it should have been—for the simple reason that it took time to nurture in man the high obligation he owed to his Maker, his country and himself, to so use and de-develop that which was intrusted to his hand, that it might be improved, and the true design of our Creator carried out.

And what is an Agricultural Fair? Is it a place where the most superior specimens of agricultural products are exhibited to the view of the visitors? Yes. What then? is that all the object, the aim, the end, to be accomplished? If so, let them go by the board. But a higher object is to be accomplished—has been, and will continue to be—the interchange of thought among those who have produced the articles on exhibition. It is in this light that Agricultural Fairs are accomplishing the grand results which will continue to rank us as a practical farming and progressive people. It is not enough that we should see the superior crop of grain, &c., but we should have the man with us, that we may know by what process he produced it, so that his co-laborers may know and realize the facts which are brought before them in its most practical form. It is not enough that we see fat cattle, but that we see the husbandman who produced them, that our less fortunate husbandmen may, by inquiry and observation, be aroused to the necessity of doing likewise—so that the object of the Fair may be the means of perpetuating the progressive spirit of political and rural economy.

Fairs, rightly conducted, are great stimulants to good and thorough cultivation of the soil. Nothing is so well calculated to create as healthy a feeling, or develop so thoroughly the true dignity of Nature's noblemen, as this theatre, where all may meet in the exhibition of the arts of peace and usefulness: where those who have failed to realize their fond anticipations from the exhibition of their products, rejoice in the success of their neighbors. It is this feature which endears them to all good men who know the wants of our farmers, and who have, from the earliest stage of their existence, stood by them, believing they were destined to accomplish as much good in their sphere of usefulness, as Education has in hers.

The benefits accruing from Agricultural Fairs are of a two-fold nature, and apparent to all. Where the Fairs are made an object of attraction, you will find the greatest amount of thriftiness and prosperity prevailing in the sections which contribute to, and take an interest in, their prosperity. The benefits flowing from them are not to be estimated in a pecuniary sense. There are benefits conferred on the agricultural interest through the influence of this institution, which command our most hearty admiration and respect for those public benefactors of our race who have nurtured and expanded this germ, so that agriculture should take once more her rank as one of the most honorable pursuits of man.

Williamsburgh, N. Y. T. C. W.

A FEW WORDS ABOUT FENCES.

Messrs. Editors:—When this part of the country was new, we had plenty of fencing timber, such as white oak, red oak, white ash, black ash, white elm, red elm, basswood, and a very little whitewood and butternut. Our fences were uniformly made of rails, into what is called a "worm fence." This is made by putting three or more stakes in a straight line where the fence is to be made—one at each end, and one in the centre. If the ground is level, these stakes can all be seen from either end of the line. In order to make a straight fence, the man who lays the bottom rail uses a fence gauge, viz—a stake six or seven feet long, the size of a good handspike, sharpened at the lower end, with a hole one and a quarter inches in diameter—and a stick three feet long, to give the fence a crook, or angle, of six feet. Beginning at one end, the stake is stuck in the ground to range with the stakes above mentioned; then put each corner of the fence, at the end of the three feet stick, or gauge, to the right or left. The fence is laid from five to eight rails high, and staked and ridered, or not, according to circumstances. Since our timber has been cleared off, fences are very liable to blow down, unless they are well staked and capped.

When farmers began to get their farms cleared up, they put up board fences in front, and around their

horses, and occasionally pickets around their gardens.

At length the post and rail fence was introduced. This was considered a great saving of timber, and was made by cutting and splitting oak posts, six and a half feet long, and making five holes with a post-axe, and setting each post about two feet in the ground, leaving about four and a half feet above. The rails were split flatwise, sharpened, and driven together in each post. This kind of fence did well for a few years, and took up but a small space of ground; but it was much exposed to the wind, and the posts soon rotted off at the surface of the ground, and it has been out of use for quite a number of years.

At the present time there is a large amount of board fence made. White oak posts are used. Cedar and chestnut are brought from a distance, and used sometimes. All kinds of boards are used—pine, hemlock, oak, beach, basswood and maple.

I have made a great deal of fence, of posts, boards and stones, as follows: I cut my posts six feet long, split them when the timber is good, and saw them when I cannot split. I set my posts seven feet apart, build up a wall from eighteen to twenty-four inches high, and put on three boards, from five to nine inches wide, about five or seven inches apart. I then bank up with dirt to the bottom of the lower board, and seed it well with any kind of grass seed. This makes a very good fence, takes up but little ground, and is not easily blown down.

In building fences now, I wholly dispense with stones, and make my bank with dirt, and raise it a height to suit my boards. I usually put on three boards, about six inches wide. The banking should be well done, and carefully seeded. I consider this the cheapest fence that can be built with timber. The posts should be cut six feet long, and split small, when the timber runs free. When the timber is on the ground, three men can put up thirty rods, and bank it, in two days. NATHANIEL SMITH.

SUBSOIL PLOWING.

MESSRS. EDITORS:—The farmer who thinks of subsoiling, should study well the nature of his soil. Mr. A., who owns a farm with a surface soil about six or eight inches deep, underlaid with a hard, compact clay subsoil, impenetrable alike to the roots of plants or the refreshing shower, finds, upon subsoiling a part of his fields, that upon the portion thus treated his crops not only stand the drouth better, but are not affected by water standing upon the surface. He proclaims this to his neighbors, or heralds it through the columns of the Agricultural Press; and Mr. B., who owns a farm with a deep gravelly or sandy soil, without considering that nature has already subsoiled his land, immediately orders a plow from Boston, or some other distant place, at a great expense, and, after trying a portion of his fields, and finding no perceptible difference in the crop upon that which is subsoiled and that which is not, he proclaims the subsoil plow a humbug,—when a few moments' reflection would have taught him that Nature had already done more for his land than his neighbor could do for his by years of subsoiling.

A shallow surface soil, with a hard, compact subsoil, will derive much benefit from subsoil plowing. We cannot plow such lands deeply, without throwing the subsoil to the surface, which injures the land, especially for spring crops. But by using the subsoil plow, the earth is mellowed to a greater depth, and the subsoil remains in the bottom of the furrow, giving the roots an opportunity to penetrate more deeply into the earth in search of moisture,—consequently the crop will not suffer so much from drouth; and in a few years this soil will become enriched from the gases absorbed from the atmosphere, decayed roots, &c., and the surface water in filtering through it will be robbed of its ammonia, when it can be turned to the surface with much benefit.

The subsoil plow here spoken of is the real subsoil plow, not the so-called Michigan subsoil plow. The genuine subsoil plow is used by following in the furrow of the common plow, loosening the earth to a greater depth, and leaving the subsoil in the bottom of the furrow, while the Michigan plow throws the subsoil to the surface. C. C. WILSON.

Newfane, Niagara Co., N. Y.

FARMING A SCIENCE.

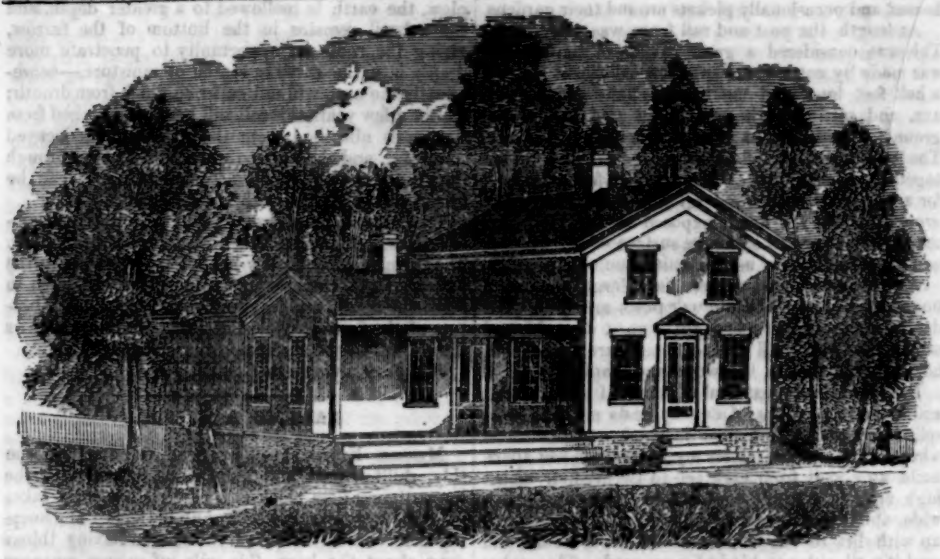
MESSRS. EDITORS:—Why need we compare the tidy, skillful, neat and industrious farmer, with the loose, thoughtless, slack and careless one, who takes no pride whatever in keeping up his fences, and keeping their corners free from rubbish, in having things snug about the barn, (his wife, of course, manages the house,) and, in short, wholly void of forethought in all his operations? Surely, there is no comparison between these two farmers; they differ as widely as the untaught Indian and the man who works on principles based upon science and practical observation.

It is an easy matter to distinguish these two farmers apart, and in passing their farms the contrast comes very forcibly upon us. On the one hand, we see a neat and elegant cottage, with its green blinds, shaded walks, good fence, with a garden near the house, and in immediate proximity to the kitchen. On the other hand, a lone, dilapidated, wood-colored house, standing alone, exposed to the severity of the cold winter winds and the scorching rays of the summer's sun, unprotected by a few friendly shade trees; all this for the want of a little more care and economy—a lack of industry, a want of forethought, an uncultivated and unrefined intellect, gross and unnatural tastes—which are a detriment to all successful farming operations, remedied only by a theoretical, practical, and straight-forward course, with a determination to secure his crop by a good fence, and tend it by the hand of industry, when Nature will not fail to reward his labors by an abundant harvest.

W. N. C.

CULTIVATION OF TURNIPS.—The flat turnip is much esteemed for table use. The time for sowing is during the present month. Large crops have been raised on newly-cleared land, which was *too rooty* to be plowed, by raking and burning it over, and then harrowing it before sowing the seed. Where the ground can be cultivated properly, it should be freshly broken and harrowed before sowing. Sow in cloudy, damp weather—before a moderate rain, if possible. A top dressing of ashes, sown broadcast, will be very beneficial to the plants. If troubled by the fly, sow some flour of brimstone on the plants while wet with dew. Keep the weeds down, and the ground loose with a hoe, if you want an extra yield.

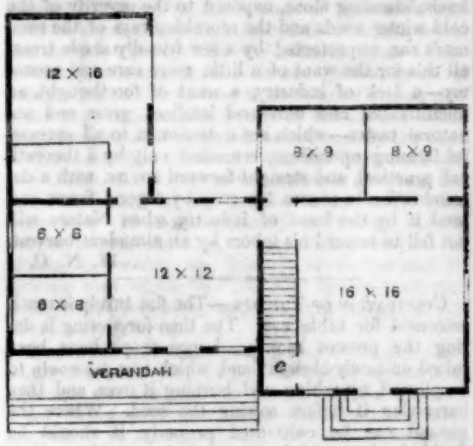
Laceyville, Ohio. J. G. SAMPSON.



DESIGN FOR A FARM HOUSE.

The above excellent plan of a house, we received from G. N. Chase, Jr., of Wiscoy, N. Y. It commends itself to our readers for its simplicity and cheapness, as well as for its convenience and beauty. There is a home-like look about it, that bespeaks the comfort of its occupant, and which is not seen about the "gingerbread" ornamented houses for which there has been such a rage for the past two years, and which, we are happy to say, is gradually subsiding.

The interior arrangement is as follows: In the main body of the house, on the first floor, is a large parlor, lighted by three large windows. Back of the parlor are two bed-rooms, each eight feet by nine. On the left of the parlor, at the front, is a closet, *c*. The stairway is also on the left of the parlor. The entrance to the stairs is towards the back of the house. A door communicates with the kitchen, which is twelve feet square. On the left side are two bed-rooms, each six feet by eight. Back of the kitchen is a passage leading to the wood-shed; on the left of the passage is a large pantry. The wood-shed is twelve by sixteen feet. It may be used as a kitchen, if desired; and the kitchen in the wing can be used as a sitting or dining room.



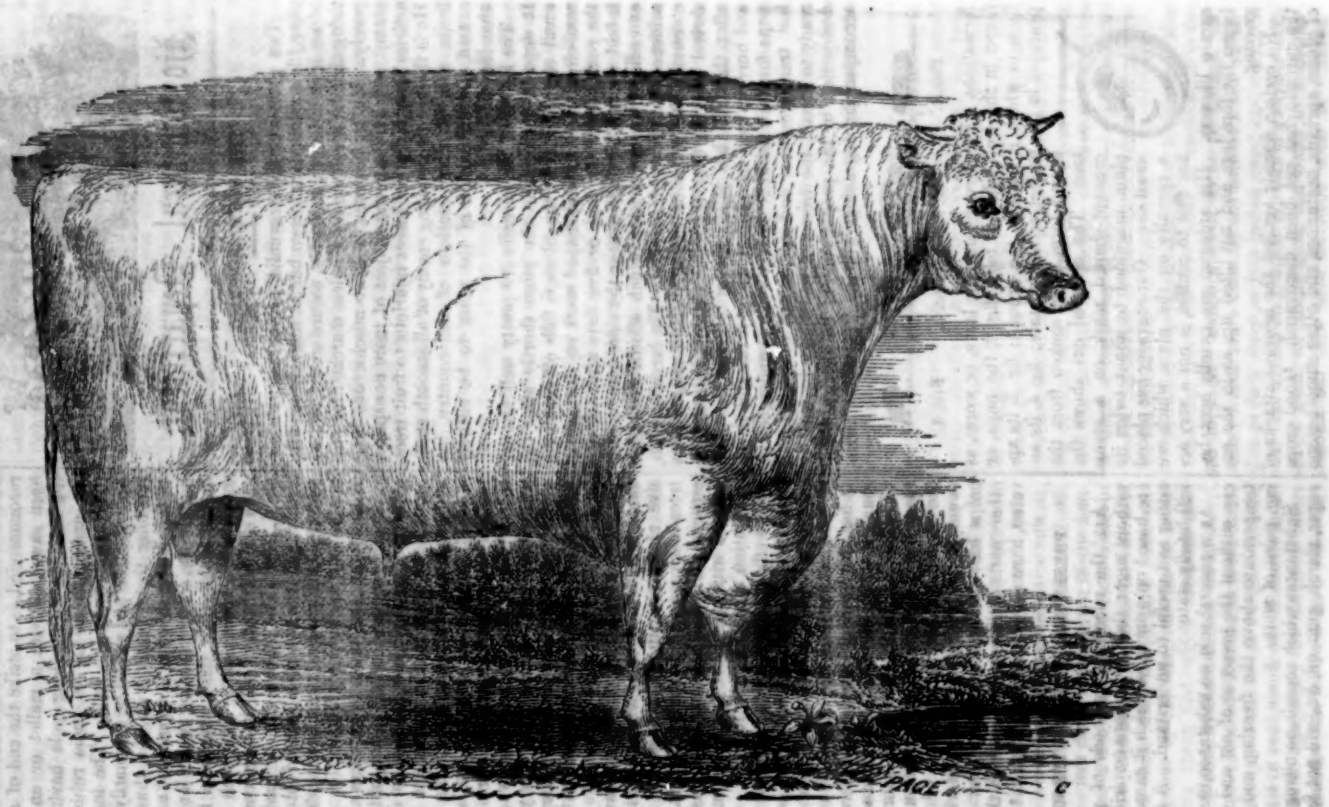
GROUND PLAN.

We think the house could be made still more convenient, by constructing a hall in the main building where the stairway is, having the front door near where the left front window is situated. The hall should be at least eight feet wide. This would still leave a large parlor.

The chamber floor is to be divided into one large chamber, the size of the parlor, and two smaller ones, corresponding with those below; or it can be arranged to suit the builder.

The house is to be constructed of wood or brick, as suits the builder's wishes. The lower rooms should be nine feet high; the upper chambers seven feet. The interior finish should be plain, to correspond with the general expression of the house. Although no window blinds are given in the engraving, yet we think there is nothing adds more to the appearance of a house. They give it a look of comfort that is always pleasing to see. A house without them, always seems to us to be staring at something; and in winter it has a cold appearance. Inside blinds, to be sure, do away with this appearance somewhat, and are, in our opinion, much more convenient than outside ones; but they are more expensive than the others, and therefore are seldom seen in our country houses. Yet, if there are inside blinds, there is no need of curtains, and in the end, perhaps, they are the cheaper.

A house like the above should be situated on a level piece of ground, and well surrounded with trees and shrubs, which will not only add greatly to the appearance of the house, but will serve as a protection from severe winds, and make it much more pleasant in both winter and summer.



SHORT-HORN BULL DON.

Don (12,707), white; bred by the late N. J. Becar, of New York; calved July 31st, 1852. By Lord of Eryholme (12,205); dam, Apricot, by Third Duke of York (10,166); g. d., Annie, by Fourth Duke of Northumberland (4,949); g. g. d., Anna, by Short-tail (2,621); g. g. g. d., Accomb, by Belvidere (1,706). Don is now the property of the Illinois Breeding Association, at Summit, Illinois.

Horticultural Department.

THE PLUM CURCULIO.

The plum weevil, or curculio, *(Rhynchænus nenuphar,)* is a small, dark brown beetle, scarcely one-fifth of an inch in length, and of a nature so shy and retiring that he is seldom seen, unless searched for purposely. He is, however, a most mischievous little scamp, and has been the subject of more newspaper articles than any other insect injurious to fruit trees. He is the uncompromising enemy of all smooth stone fruits, and, in many sections of the country, has caused the cultivation of the plum to be entirely abandoned.

The habits of the curculio are pretty well known. It deposits its eggs in the plum shortly after the small cap formed by the blossom falls off, making a semi-circular or crescent-shaped mark on the side of the young fruit. In four or five days after the egg is laid, a small bluish line, near the skin, may be seen extending from the incision, which affords conclusive evidence that the egg is hatched. The larva, or grub, consumes the juices of the plum, and causes it to shrivel and fall from the tree. Almost immediately after the fruit has fallen, the grub leaves the plum and burrows into the ground, where it remains in the pupa form till the next spring, when it undergoes its last transformation, and comes out of the ground ready to ascend the tree and commence its work of destruction by the propagation of its species. The accompanying engravings will illustrate these trans-

Fig. 1. Fig. 2. Fig. 3. Fig. 4.

formations. Fig. 1 represents the larva, or worm, as found in the fruit when it falls; fig. 2, the pupa, or form in which it lives in the ground; fig. 3, its appearance in the perfect or beetle state; fig. 4, its assumed form when shaken from the tree. The annexed cut shows the crescent-shaped mark on a stung plum, magnified to about twice its usual size. Our engraver has placed a curculio on the plum, which, we are free to confess, is not a very accurate likeness. His antennæ are usually bent between the fore legs, and not lifted up, as in the engraving.

No certain remedy against the injurous attacks of the curculio has yet been discovered. Good crops of plums, apricots, nectarines, and other smooth stone fruit, however, can be obtained by the diligent use of processes founded on the well known habits of the "Grand Turk." The most efficacious, is that known as "jarring the tree." As soon as the insects make their appearance, or when the plums are about the size of peas, spread white cotton sheets under the tree, and shake off the curculio. The plan usually recommended, is to strike the end of a limb that has been sawed off with a mallet or an axe, or to rap the branches with a long pole having a bumper at the end, such as an old India rubber overshoe, to prevent injury to the bark. The insects will drop from the tree, and should be summarily disposed of by pinching them gently with the thumb and finger. If the cotton sheeting is spread out and tacked to a light frame, six feet wide by twelve long, and doubling in the middle like the leaves of a book, it will be much more convenient. Two such frames, one on each side of the stem, will be large enough for a good sized tree. The sheets can be easily doubled together, and the curculios poured into a pail of hot water. This process must be repeated every morning, as long as any curculios are found on the trees. A sharp rap is requisite to jar them all off.

Another method, nearly if not quite as efficacious, and requiring much less labor, is to dig up the soil around the trees in the spring, and tread it smooth and hard, and sweep up all the stung fruit as soon as it falls from the tree. It is not too late to adopt this method the present season, and our object in writing this article is to urge our readers to give it a trial. True, it will not save the fruit this year; but if the plums are picked up as soon as they fall, the larvæ will not get into the ground, and next year there will be but few curculios to molest the fruit. Messrs. Ellwanger & Barry, of this city, we believe originated this method, or at least adopt it in their extensive nurseries with great success. All their plum trees last year were loaded with fruit. We recollect especially a *Bradshaw* tree that was so completely covered with large and beautiful plums as to be the admiration of all who saw it.

The efficaciousness of this process is corroborated by the well known fact that where hogs and poultry have free access to the plum trees, and eat the plums as soon as they drop, the curculio is not troublesome. It has also been observed, that where trees are surrounded with a close brick or stone pavement, and where, consequently, the larvæ cannot burrow into the ground, the fruit is not injuriously attacked by the curculio. Mr. Longworth, of Cincinnati, has twenty-seven trees so situated, and which have borne crops for the last twenty-five years, while trees in other parts of his grounds, where the soil is cultivated, have only borne two crops in the same period.

PRESERVING FRUITS WITHOUT SUGAR.

All the successful methods of preserving fruit without sugar, though perhaps empirically discovered, are based on principles which it cannot but be interesting and useful to understand. A few of these we will briefly state.

As a general rule, no substance can ferment or decay without the presence of air and moisture, and a temperature above the freezing, and below the boiling, point of water.

Substances which contain no nitrogen, such as pure sugar, starch, gum, oil, &c., will not ferment or decay.

All nitrogenous compounds, under favorable circumstances, not only undergo rapid fermentation themselves, but have the power of disturbing the elements of non-nitrogenous bodies with which they are in contact.

A compact and insoluble nitrogenous substance is not as liable to ferment, or to induce fermentation in other bodies, as one which is porous and soluble.

Heat renders many nitrogenous substances more compact, and otherwise retards fermentation. For instance, fresh milk soon curdles in a warm room; its nitrogenous ingredient, caseine, or curd, absorbs oxygen from the air and ferments, and in this state rapidly converts the sugar of milk into lactic acid. This acid neutralizes the soda which holds the caseine in solution, and the milk becomes curdled. Now, it is well known that if milk is boiled, it will keep sweet much longer. In fact, if milk is boiled every day, it may be kept sweet for an indefinite period.

All fruits contain a nitrogenous substance, generally albumen (the white of egg) or gluten. In a perfect fruit, this is separated from the sugar, starch, gum, and other non-fermenting ingredients of the fruit, by cellular matter. In compact fruits, too, such as the apple and pear, the skin protects the albumen from the atmosphere to some extent, and it is, therefore, but slowly decomposed. Crush the apple, and the albumen, being brought in direct contact with the atmosphere and with the sugar, rapidly absorbs oxygen, and induces decomposition. The porous fruits, such as the strawberry and raspberry, have little cellular matter or skin to protect the albumen from the air, and hence, though the fruit remains intact, decomposition soon sets in. In the former case, Nature partially excludes the air, and thus the preservation of the fruit is easy; in the latter, the air must be excluded by artificial means, and hence the preservation of the fruit is attended with considerable difficulty.

The oxygen of the air is undoubtedly the exciting cause of decomposition; but it would appear that, under certain circumstances, when the albuminous matter of the fruit has commenced to decay, the exclusion of atmospheric air does not completely arrest it—probably the water of the fruit is decomposed, and thus furnishes oxygen. To preserve fruit, therefore, we must not only exclude atmospheric air, but must arrest decomposition before the fruit is sealed up. *The only practical way of doing this, is by the application of heat.* This fact has been generally overlooked by writers on this subject. Couverchel made numerous experiments on the preservation of fruits *in vacuo* and in nitrogen, and the results led him to the conclusion that "the *taste* of fruits cannot, under any circumstances, be preserved." Mulder, another eminent chemist, is of the same opinion, and says: "Apples, sent from Holland to India, packed in vessels free of air, became perfectly tasteless, although not a trace of putrefaction could be perceived." The fact that gooseberries, currants, cherries, peaches, and other fruits, have been preserved without sugar by expelling the air from the vessels containing them, and which retained their flavor but little if any impaired, cannot be doubted. The failure of these chemical experiments is attributable, in all probability, to the cause we have alluded to. It is essential to cook the fruit sufficiently to arrest all decay, and to coagulate the albumen before the vessels are sealed.

A lady who has had considerable success in preserving cherries without sugar, has kindly furnished us the following recipe: "Take the common red cherries, and remove the stones. Put them in wide-mouthed, light glass bottles. Then set the bottles in a boiler of cold water, within an inch or so of the neck. Let them boil from fifteen to twenty minutes. Put the corks in the bottles as tightly as possible, while the water is boiling. Then take out the bottles, tighten the corks, and seal them with a wax made of equal quantities of rosin and beeswax."

This method has proved quite satisfactory. The *rationale* of the process will be readily perceived. The heat coagulates the albumen of the fruit, and arrests all change which may have taken place by the absorption of oxygen, and at the same time expels the air from the bottles. The corks, being put in while the bottles are filled with steam, and quickly tightened and sealed, effectually exclude the air, and with it all exciting cause of fermentation. The reason why the bottles are placed in cold water, is to prevent them from breaking. If tin cans are used, there will be no need of this precaution. Sometimes, too, the bottles break after being taken out of the water, and it is advisable to wrap a cloth around them for a few minutes.

Green gooseberries and currants may be preserved in the same way, except that they do not need so much boiling. If the bottles are heated sufficiently to drive out most of the air by expansion, and carefully corked and sealed while hot, nothing more will be required. In fact, they are sometimes kept by simply putting them in tightly sealed bottles, without any boiling. In this case, the gooseberries, not being ripe, absorb the oxygen from the small quantity of air in the bottles without injury. If the bottles, after being sealed, are placed in hot water for a few minutes, this absorption of oxygen takes place much more rapidly, with the formation of carbonic acid. Unless the fruit is quite green, the former method is undoubtedly the best.

Green peas can be preserved in the same manner as gooseberries and currants.

In England, green gooseberries are frequently preserved by placing them, when dry, in a stone jar or other vessel, and burying it in the soil, below the reach of frost.

Mulching.—In our dry, hot climate, mulching is of great benefit to all garden crops on light, sandy soils. Its effect is to check evaporation, and keep the soil moist. Spent tan-bark is probably the best of mulches, but sawdust, chip manure, peat, coal ashes, &c., answer a very good purpose. All recently transplanted trees are much benefitted by mulching on such soils. Strawberries are greatly improved, and the necessity of weeding obviated, if the mulch is thick enough—as it should be—to smother the weeds. Mulching is the best preventive of mildew on the gooseberry yet discovered.

On rather heavy, retentive loams, mulching is also beneficial, but a different mode of application is desirable. We should *mulch with the soil itself.* In other words, stir constantly the surface soil with the hoe or fork, three or four inches deep, and it will be the best of mulching, not only retarding evaporation, but drawing fertilizing gases and water from the atmosphere.

THE SCARLET-FLOWERED HORSE CHESTNUT.

THE HORSE CHESTNUT AS AN ORNAMENTAL TREE.

At this season of the year, when in full bloom, there is no tree to us more beautiful than the common Horse Chestnut. There are many fine specimens in this city, and we rarely pass one without stopping to admire it. The rapidity of its growth after the foliage begins to expand, is truly astonishing. It exhausts itself, however, in a short time, and, on the whole, is rather a slow-growing tree. Still, there are few, if any, trees at the North, having blossoms so rich and beautiful, that attain to such dimensions. Imaginative writers have termed it the "Gigantic Hyacinth," the "Lupine Tree," &c. Others, to point a moral, alluding to the gaiety of its blossoms, and the prodigality with which it scatters them on the grass, and the comparative uselessness of its fruit and timber, have regarded it as a fit emblem of ostentation.

The principal value of the horse chestnut is as an ornamental tree. In point of floral beauty, it is unequaled by any tree of equal size that will endure our Northern winters. Still, it is not without other useful qualities. Though not of a spreading habit, its ample foliage affords considerable shade; charcoal made from it is used in the manufacture of gunpowder; the bark is employed for tanning, and also for dyeing yellow. In some coutries, the nuts are fed to goats, sheep and deer; and when ground and mixed with other food, they are said to be good for broken winded horses.

The horse chestnut is easily propagated from seed. Well ripened nuts should be sown in a rich, deep, free loam. A bushel of nuts is sufficient for a bed four feet wide and sixty feet long. When one year old, the seedlings should be transplanted into nursery rows, two feet apart, and one foot in the rows. In three years, they will require to be removed to more commodious quarters. Any farmer may easily raise all he requires. The fibrous nature of the roots of this tree, particularly after being frequently transplanted in the nursery, prepares it for being removed with safety when of considerable size. This valuable property fits it for immediate effect in decorating grounds and in forming avenues of verdure.

The scarlet-flowered horse chestnut *(Æsculus rubicunda)* is a smaller tree than the common horse chestnut, and of a less vigorous growth. It flowers at an earlier age, and the leaves are of a deeper green than those of the common horse chestnut. The accompanying engraving hardly does it justice. Loudon justly observes: "It is, without doubt, the most ornamental sort of the genus."

The double-flowering white horse chestnut, figured in the *Genesee Farmer* for January, 1852, (we observe that the *same cut* is given in last week's *Rural New Yorker!*) is a variety of the common horse chestnut, with double flowers. It is a new and beautiful tree, and, though still scarce, can be obtained, probably, at any of the leading nurseries.

The Ohio Buckeye belongs to the Horse Chestnut family. In fact, Loudon thinks it only a variety of the common horse chestnut, and "far inferior to it in point of beauty." He judged from two specimens which had been taken to England.

SPECIAL MANURES.

Under this head, the *Horticulturist* publishes a letter from L. Wyman, Jr., of West Cambridge, Mass., in which Gould's Muriate of Lime is recommended to horticulturists as the very best of all manures for fruit trees. It may be well to inform our horticultural readers that this manure has been analyzed recently by Prof. Johnson, of Yale College, with the following result:

Analysis of Gould's Muriate of Lime.

Organic matter, mostly coal-dust,	6.48
Sand,	6.38
Soluble Silica, combined with lime or alkalies,	6.79
Sulphuric Acid,	.62
Lime,	43.55
Magnesia,	2.07
Peroxyd of Iron and Alumina,	4.12
Potash,	2.10
Soda,	.45
Chlorine,	1.27
Water, mostly combined with lime,	6.63
Carbonic Acid,	19.54
	100.00

Two analyses of the article were made, and the results were the same in both cases. Prof. Johnson is one of the ablest and most reliable chemists in the country, and it is impossible to doubt the accuracy of the above analysis. No one at all acquainted with the composition and value of manures, and the requirements of plants, can for a moment doubt that Gould's Muriate of Lime is an *unmitigated humbug*. There is scarcely a trace of "muriate of lime" in it, no phosphoric acid, and no ammonia, actual or potential.

Prof. Johnson well observes: "If the specimen I examined was a fair one, it is evident that the 'muriate of lime' is chiefly remarkable for its supplying to the farmer a stuff having a value *inferior* to leached ashes."

DWARF TREES OF CHINA.

All have heard of the dwarf trees of China. The dense population, the low price of labor, and the general taste for horticulture, all conspire to render the cultivation of dwarf trees particularly attractive and profitable to the Chinese. Anything which retards the free circulation of the sap, prevents, to a certain extent, the formation of wood and leaves. The Chinese understand this principle perfectly, and, as a general rule, their system of dwarfing is founded upon it. But in a recent work, *China and the Chinese*, a description is given of a mode of dwarfing, embodying a somewhat different principle. The branch of a grown tree is covered with mould, which is bound round with cloth or matting, and kept constantly wet; the fibres of the branch thus covered soon shoot into the mould, and then the branch is carefully cut from the tree, the bandage is removed, and it is planted in new earth. The fibres then become roots, and thus that which was previously a branch on the parent tree becomes a trunk, bearing flowers and fruit. The buds at the extremity of the branches which are intended to be dwarfed, are torn off as soon as they appear, and by this means the branches are arrested in their growth, and other buds and branches shoot out. After a certain time, sugar juice is applied to the trunk of the dwarf tree, by which means insects are attracted, and thus the bark is injured, and that knotted appearance, peculiar to old trees, is produced. The author says he has had in his possession an oak, two feet high, bearing acorns, and its trunk exhibiting all the external marks of an aged tree. He has also had orange and citron trees, not over two feet high, bearing fruit of very fine flavor. One of these orange trees had on it, at the same moment, incipient buds, blossoms in full flower, fruit newly set and of full size, in a green state and ripe. He has also had a bamboo tree, two and a half feet high, so distorted as to represent a dragon with a boy seated on his back!

Lime Barrels for Preserving Apples.—A correspondent of the *New Jersey Farmer* says: "I had occasion to overhaul some apples the other day. They were picked in the same orchard, and on the same day, and were put away the same day; and some in flour barrels and some in lime barrels. Those in the flour barrels were much decayed, while those in the lime barrels were sound, and but very few showed any signs of decay. The apples were of the same variety."

Under certain circumstances, it is well known that lime acts as an antiseptic, though under other circumstances it accelerates decomposition. For instance, it will preserve *dry* straw, but decompose *wet* straw. In the above instance, the lime on the barrels probably excluded the air, and absorbed the moisture given off by the apples, and thus counteracted two of the principal causes of decay.

HORTICULTURAL OPERATIONS FOR JULY.

It will not be too late to repeat the sowings of peas, string beans, sweet corn, spinach, lettuce, radish, mustard and cress.

Peas.—To have a late supply of good peas, it will be necessary to give them the best piece of ground that can be commanded—for when sown on poor, shallow, or very dry soil, they are almost sure to be spoiled by the mildew; therefore let the ground be deeply spaded and highly manured—if trenched two spades deep, so much the better. Dwarf Blue Imperial, and Knight's Dwarf Marrow, will be the best varieties for late sowings. They grow three feet high.

Dwarf Beans may still be sown, and will do moderately well on poorer ground than almost any other crop, although the better the ground the better will be the success. Should there be more sown than are wanted for the table, they will come in excellently well for pickling.

Sweet Corn may still be sown, up to the middle of the month. There will be no occasion to hoe the soil into hills; it will be better to sow the corn on the flat surface—for there will be no danger of the ground being too wet or too cold at this time of the year.

Spinach.—Another sowing of spinach may still be made, for summer use; but it will be necessary to give it a rich, moist piece of ground, to enable it to make large, succulent leaves. It will be found very useful all through September.

Radishes, Mustard and Cress will do excellently well when sown on the north side of a wall or board fence at this time of the year. They should be watered every evening, in dry weather.

Purple Egg, Cauliflower and Celery, in dry and hot weather, will require frequent waterings. If the egg plant and cauliflower were planted in trenches,

as recommended, it will be well to stir the earth immediately about their roots, and hoe earth up to their stems a little, still preserving a gutter to hold water. Pick off any decayed or broken leaves, if there be any, and give a thorough soaking of clear manure water or soap-suds twice or three times a week, in hot, dry weather; give at least half a pailful to each plant. For the celery, stir the soil with the hoe a little in the trench, and apply the water a few inches from the plants, to avoid washing the earth into the hearts of them, which would be liable to rot them out. Give a thorough soaking, so that the water will penetrate to the extremities of their roots. It will help them a great deal, if a little Peruvian guano be mixed in the soil in the trench, before the application of the water.

Earthing up the Celery.—About the last week of the month, it will be time to earth up a few of the best plants for early use in September; but for the main crop, the last week in August will be early enough to begin. Before earthing, clear away the soil a little around the collar of each plant, if necessary, and pick off all the broken and cracked leaves and suckers, if there be any, leaving nothing but straight, strong and upright leaves. Now give a thorough soaking of water; then take a number of pieces of string—as many as you have plants in a row—about eighten inches long, and take each plant separately, collect its leaves together and hold them tightly in the left hand, keeping its heart well protected by the outer green leaves, and with the right hand tie a piece of string around it, with a slip-knot, that will easily untie. Tie as many plants in this way as may be wanted for early use. Then, with a spade, earth them up about four inches, leaving the earth falling a little from the plants, to prevent the applications of water from washing it into the hearts. Repeat this operation every two weeks for the early crop, and every three for the late.

Keep the ground between the crops frequently stirred with the hoe, and all clear of weeds. Keep the edges of the beds neatly trimmed, and the walks scrupulously clean. Nothing tends so much to the good appearance of a place, as neat walks and a smooth lawn.

Josiah Salter.

SULPHUR TO KILL ROSE BUGS.

Messrs. Editors:—In looking over the June number of the *Genesee Farmer*, I noticed an article headed "Sulphur to Kill Rose Bugs." Your correspondent says:

"When visiting in and around Richmond, Ind., last autumn, I was delighted with the abundance of splendid roses that ever met my view, and which seemed then to be in their glory. I inquired of several if the bug had not visited them. The reply invariably was, 'Oh yes, but we destroyed them with sulphur.' The plan for so doing was to put sulphur (the hard) on a plate under the bush, and set on fire, and then cover something over the bush while the fumes lasted. I remarked that sulphurous inhalations must agree with the bush, for they appeared extremely healthy, a few of the under leaves only dropping off."

Now, gentlemen, with much deference to your correspondent, I feel constrained, from knowing the ill effects of the fumes of burning sulphur upon the tender foliage of plants, to make one or two remarks. 1st. When sulphur is burned, sulphuric acid gas is produced, which, if it comes in contact with the foliage of plants, is as surely destructive as immersing them in boiling water. I have seen it tried many times. 2d. I would advise amateurs to use burning sulphur *very cautiously* among their pets; and if they wish to try a few experiments, to try them on the smallest possible scale.

If I am not taking up too much of your valuable space, I will instance one or two cases in my humble experience. In the year 1846 I had a very splendid gooseberry tree, of the Warrington variety, four feet high and four feet in diameter, and perfectly symmetrical in all its parts. It was a picture of usefulness and beauty, for it was laden with luscious fruit, which we desired to preserve as late in the fall as we could. But they were so attacked by the birds and wasps that it was evident we should soon have no gooseberries left, unless something was done to protect them. We therefore covered the tree with thin canvas, but the wasps found their way in at the bottom, by hundreds, and it was evident that something else must be done. I thought this time I would give them a settler. I loosened the canvas at the bottom, and placed a tea-saucer with some burning brimstone in it directly under the opening, so that the fumes would go up into the tree. The wasps came tumbling down by scores, and we laughed and danced over our fallen victims. But, alas! the next morning we laughed on the "other side of the mouth," for the leaves came tumbling down by *tens* of scores. The fruit, what was left of it, hung on longer than the leaves; but the tree was ruined for the season, and it did not feel very well the next, for it looked as though it had the fever and ague all the time.

Again, in 1852, I had the care of a vinery of exotic grapes, which had been somewhat neglected the year before, and consequently the vines had on them a few more fritters, thrips and red spiders than I liked to see. Not having any fumigator, I took some thick, soft blue paper, and saturated it in strong saltpetre water. When the paper was dry, I divided half a pound of cut tobacco into three parts, and rolled it up in the paper; I then laid them at equal distances from each other on the floor, and set them on fire. They burned very well, smoking without flaring, and filled the house with smoke, and had the desired effect, so far as the killing of the insects. But at the end, near the door, we had a nectarine tree growing, which harbored the red spiders; and knowing it to be very difficult to drive them away with tobacco alone, I ventured to put on the roll of burning tobacco nearest the tree about a table-spoonful of the flowers of sulphur, and stood with my face over it all the time, ready to jerk it off the instant I could detect the smell of burning sulphur. I did not smell it, and allowed it to burn out, but the fumes of the tobacco nearly made me vomit. On opening the door the next morning, to my great consternation, the house smelled as though a great pile of green leaves was just beginning to ferment. I looked up, and beheld all the leaves on the upper part of two of the vines as literally dead as though they had been dipped in boiling water, and was very sorry to be obliged to cut off eight or ten splendid bunches of Hamburgh grapes, about half grown, to save the vines. I have been very cautious in regard to burning sulphur among plants ever since.

Where there are insects on rose trees out of doors, I would advise you to syringe your plants all over and under, and on each side of the leaves, with clear tobacco

water, every evening for a week or two, or from the time the insects are first seen until they have disappeared. It will not hurt even the tenderest leaves of any plant, if applied in a *clear* state. It is certain death to thrip and fritters, and all the family of aphides, and is very annoying to even the red spider and the rose bug. It will make even a *pig* sick, although I have seen *men* chew tobacco. JOSIAH SALTER.

IN "MY NEW GARDEN."—No. 1.

IT may be, Mr. Editor, that you will not refuse to walk with me occasionally in *my new garden*, and let me tell you of some things suggested by the "working and watching" I perform therein. Any one, with half an eye for the operations of Nature, may find much food for reflection, as well as business for the hands, in such a place. The growth of plants, the operation of manures, the ever active insects, harmful and harmless, the thousand things I can only wonder at, not understand, seem to me worthy of careful study, and I am sorry I am so illy prepared to talk upon them. May I not hope for the assistance of yourself and correspondents upon the themes on which experience enables you to throw light, as such may be brought before us in these *brief* rambles?

ASPARAGUS.—Come and look at my bed, made April 30th. I first dug out the top soil as deep as it had ever been plowed, and placed it on one side for returning; then took out a spade's depth of the under soil—removing it entirely—then loosened up the bottom of the pit six or eight inches deep. In quantity then added eight or ten inches in depth of decomposed barn-yard manure, mixing it with the returned surface soil, and placing three or four inches of good garden mould upon the top of the whole. From the old bed, roots were procured and planted, about eighteen inches apart, and I then rounded up my bed slightly and called it complete. I should have mentioned, however, that the soil was loosened up from one end of the pit, so as to form a drain for the same; for in compact soils such an excavation would retain an over proportion of moisture.

The roots have mostly sent up vigorous shoots, and promise well. I cut none this summer, as they are all needed to promote bottom growth, and prepare for future productiveness. My only care, now, is to keep the soil mellow, and to apply waste brine enough to keep down all the weeds, but in autumn the bed will need a blanket of half-rotten manure. What a "power of roots" an old asparagus bed contains—it seems as though there was one for every shoot removed.

PEAS were planted the same day, and have made a fine growth. The dwarfs seem the most thrifty—they are certainly less trouble to raise, and appear handsomely, either in flower or in bearing. I have forgotten the names of the two varieties, for the seed is some of our own growing. I might have planted peas two weeks before, but thought best to wait until the garden was plowed—which wet weather prevented until the 29th Bush peas should be planted in *double drills*, ten inches apart, so as to place the bush in the centre, but leave a space of two feet between each row of bushes.

ONIONS were set and sown that same April 30th. They are growing, as you see, and a liberal dressing of hen manure, chip-dust and ashes, composted together—two parts of the first to one each of the last—does not "set them back" in the least. It is a good thing for almost any garden crop, to my fancy—and more about it, hereafter. I do not expect a *large* crop of onions, after sowing so late; yet, if the season is favorable, there will be a handsome product of "Large Reds," and not a few fine "Top Seed" onions.

HOEING AND WEEDING take up considerable time, especially in such rainy weather. One can weed at almost any time, but it is better not to hoe when the ground is very wet—it leaves it hard, and, *somehow*, not so well fitted to the growth of plants. I have my hoe *set out* pretty well, so that I can loosen up the soil about two inches deep, by *chopping* it up, among my peas and onions. A loose soil is best for either wet or dry weather, for most plants—perhaps for all.

BUGS AND WORMS are not wanting in "my new garden." The dark brown cut worm, the wire worm, and a large beetle, (probably the May-bug,) seem most plenty—but there are others, one of whom now figures in DR. FITCH'S collection. I send you some notice of it in another article.

Maple Hill, N. Y. A COUNTRY INVALID.

THE STRAWBERRY PLANT—ITS INSECTS.

A STRAWBERRY BED was mentioned in "My New Garden" in the April number, as having been planted out last autumn. Let me refer to it again, briefly. May 7th I had an equal space dug up about fifteen inches deep, and placed thereon, eighteen inches apart, sets of Burr's New Pine, Hovey's and Genesee Seedlings, and the Early Scarlet varieties. The season was so backward here, it was equivalent to planting in April, and most of the roots have taken well, and look likely to produce a few berries. Just now some of the autumn sets are throwing out vigorous runners, but I pinch them back—it is too much to expect good fruit and increase of vines at once. As to manure, I placed a quantity of strong drainage mud from the barn-yard upon the bed, suffering it to lie through a shower or two, and then (when dry) raked it off. If the object is to get fruit instead of vines, we must not have too rich a soil.

In all "the books" on strawberries which I have been able to consult, I find no mention of the insect enemies of this plant. I find some of my vines destroyed, however, by the large white grub of the May-bug, which eat off the roots below the ground. They are, I believe, rather indiscriminate in their appetites, eating every root which comes in their way, of grain or grass, corn, potatoes or beans, and other garden plants. But the *Omaloplia sericea* seems to take hold of the strawberry plant alone, eating off the leaf and blossom stems just above the ground—its work resembling that of the cut worm upon corn and cabbage plants. Dr. FITCH, to whom it was submitted, says it is nearly allied to the rose-bug, and it resembles that insect in some degree. The specimen captured was a beetle-like insect, three eighths of an inch long, of a dark brown color, and seems to have been the only one on the bed, since no more of its work has been seen thereon, or anything resembling it.

If cultivators of the strawberry would be observant in this respect, we should soon be better acquainted with the insects injurious to the plant and fruit, and know better how to guard against them.

Maple Hill, June 12. A COUNTRY INVALID.

DRYING FRUIT.

Messrs. Editors:—Permit me to describe a little building I have on my premises for drying fruit. I call it little, for it is only about eight feet square, and the same in height. It has got a very pretty little cornice on it, is painted, has a little green blind in each gable, and a chimney in it. Under it there is a stone cellar, four feet deep, which is used as an ash-house, and above we have hooks for hanging up meat to smoke, building the fire in the ashes below; so you see there is no danger of setting our little building on fire. "But," says one, "what has all this to do with drying fruit?" I have already told you that we used this little building for an ash-house and smoke-house. Now for the third use. In the first place, we have boards the right length to reach across the sills, to form a floor over the cellar, or ash-hole, which we take up or lay down at pleasure. For drying fruit, we have racks made of very light stuff, in the following manner: We make a frame eighteen inches wide, and long enough to reach from one side of the building to the other; then, on the under side of the frame, we nail slats, about three-fourths of an inch wide and one-fourth of an inch apart. This forms a very good rack for drying all kinds of fruit not strung. Now, we have a number of the racks, and we nail brackets, or small blocks, on the sides of the building, from the floor up, for the ends of the racks to rest upon. We then fill the racks with fruit, put a little stove in the centre of the building, run the pipe up into the chimey above, and fire up, and the way fruit dries in our little ash, smoke and fruit-drying house is a caution! C. T.

Kingsville, Ohio.

OLD VARIETIES OF FRUIT WEARING OUT.

The following extracts from an article on this subject, by a correspondent of the *London Cottage Gardener*, will be read with interest, even though we are not disposed to admit the conclusions of the writer. We should be glad to hear from our experienced readers on this point:

"Beginning with Strawberries, it is somewhat odd that Keens' Seedling, a variety that has done thirty years' or more hard service, should be as healthy and vigorous as ever, and is by far the most popular variety we have, while Wilmot's Superb, and some others which followed it, are nowhere to be found. It is, perhaps, wrong to infer that these were worn out; but if we come to a much later variety, Myat's British Queen, we see unmistakable tokens of an exhausted constitution, for there are many situations it cannot be made to grow in, even by all the careful treatment that can be devised, whereas a few years ago it answered moderately, though never so vigorous, certainly, as Keens' Seedling and some others. Maybe some will be saying that it first came into existence with a debilitated constitution, and consequently cannot survive long. If that be admitted, the key of the whole argument is surrendered, for it is only a matter of time whether a variety lasts five years or fifty years, or whether one lasts the former period and another the latter.

"Human and animal life is governed by like laws, and doubtless a time will come when Keens' Seedling will cease to be as healthy, prolific and useful as it is now; but we hope to see its place taken by others of equal if not superior merit. Other examples of strawberries might be given, but we pass on.

"Gooseberries.—There being no lack of good varieties of this fruit, few care what becomes of the old ones; but one old favorite kind is certainly consumptive, the old Warrington, or what, in the north of England, is called the Ashton Red. The limited growth and unhealthy appearance of this tree, convey the lesson that it has got one foot in the grave. Another favorite old sort, the Green Gage, is still further advanced in disease; and though the Warrington is still grown, because it has established a name which we are unwilling to part with, there are few extensive plantations of it now, and the Green Gage gooseberry is all but extinct among those who grow for the market. Perhaps the most common one grown about here, (Staplehurst,) is a rough yellow one, early, but of no other merit than being a heavy bearer, and the buds on its shoots are less tempting to small birds than those of other kinds. Large Reds, Greens and Whites are also grown, but few Warringtons.

"Pears.—Whoever has seen two or three good crops in succession of Gansell's Bergamont, the fruit being also good? or where is the Crassanne grown as perfect as it was thirty years ago? Probably thirty years hence the Jargonelle will be a fruit known only to history, for healthy trees of this variety are few and far between. Many other useful old varieties are fast approaching the same end. Green Chissell, Autumn Bergamont, St. Germain, Crawford and Chaumontelle are rarely met with in the healthy condition they were some years ago; and assuredly we cannot attribute their decay to any other source than the debility of the tree—the soil, treatment and other things being the same as before.

"Apples.—This is the fruit so often referred to for examples, and numerous old kinds are significantly pointed to as affording decisive proofs of decay. The old Golden Pippin, Golden Reinette, several of the Pearmains and Codlins, and a host of others, are no longer to be met with in the healthy, profitable, bearing condition they once were, while some are discarded entirely. The Ribston Pippin and Golden Knob are fast following to the same end, and would, perhaps, have been extinct before, only they being particular favorites have been propagated wherever there was a chance of their succeeding; still the supply of them is daily diminishing, and in a few years Ribstons will cease to exist in very many places. To account for this on any other score than that of 'wearing out,' I confess to being unable; and to suggest a remedy or preventive, would be only recommending what had been done over and over again with successive disappointments.

"As it is needless to multiply examples, it is only necessary to take a glance at the condition under which fruit trees are grown. Apples, for instance, are the offspring of crabs, the best kinds being the produce of repeated sowings of the seeds of improved varieties; but be it remarked that this *improvement* cannot be effected without in some way sacrificing the constitution of the plant, and like the *breeding in and in* of animals, a delicate race is the result, differing more or less in degree as the case may be, yet still bearing tokens of that effeminacy resulting from the artificial position a grafted tree is in. This would be still more so, were it not for the vigorous nourishment it receives from the hardy stock it is worked on. Still this is not sufficient to maintain in good health scions taken from aged or long-propagated varieties, and each succeeding generation getting weaker, an abandonment of the whole takes place, as is the case in the old apples no longer cultivated. Some varieties threaten to be very short-lived; the Hawthornden apple, for instance, is seldom seen in good condition, and is often a complete mass of canker."

Ladies' Department.

WESTERN AMUSEMENTS.

Messrs. Editors:—As all of your readers may not be conversant with matters and things in the West, or how the wives and daughters of Western farmers find amusement, I will give you a sketch of some of our doings. Indeed, I imagine from the doleful and oh-how-I-pity-you faces of some of our Eastern friends who visit us, (particularly those from the cities,) that we *have* no amusements—that "it 's all work and no play." This, however, is a great mistake. There is no place in the world equal to a newly settled country for true social enjoyment. It is true, we eschew all that fastidious refinement which forbids a hearty laugh at a good joke, or a cordial grasp of the hand instead of the mere touch of the tips of the fingers; but we enjoy ourselves none the less for all that. It will never do to emigrate to a new country, and sigh after the "flesh pots of Egypt," or turn back, like Lot's wife—though a pillar of salt now and then would not come amiss; but if people come West to live, they must take things as they find them, withwithout grumbling, and improve as much as they please afterwards.

But I am wandering from my promised sketch of a fishing and plumming excursion. You must know we boast of two streets—North and South Yankee street. At such a time, all that are able turn out from both streets to enjoy the trip, and every available team is put in requisition. On this particular occasion, our destination was to the mouth of Honey Creek, a small branch of the Skunk River, where fish are generally abundant. After wending our way through the tall, rank grass of the river bottom, we at last reached the scene of operations. We had neither hook nor line, and I presume your city anglers would be at a loss to know how to get at the fish; but here the old proverb of "where there 's a will there 's a way," was amply verified. The men lost no time, but immediately commenced cutting off large branches from the trees and brush which skirt the creek, tieing and twisting them together, until they had secured enough for a cable (if I may so call it) long enough to reach from shore to shore, and about four feet in diameter. Then some fifteen or twenty of them plunged into the stream, dragging their branch rope entirely across, and some distance down, the creek; then, lowering it down to the bottom, all commenced pushing up again, until they got near a desirable place to land the fish, when those on the opposite shore pushed inward, till they reached the side with the others. Thus the fish were fairly pushed on shore, though some got caught in the branches, and were taken out by hand. Truth compels me to admit, however, that we did not get a very great haul on this occasion; for the merry peals of laughter which resounded from the spectators, joined with the shouts of those in the water, must have frightened the poor fish before they were encircled, so that many made good their escape to the river. I was told they were sometimes taken in large quantities in this way, when all was done silently. However, we came for amusement, and we got it, at least those of us who were spectators; how it was with the others I cannot say, only they appeared to enjoy the sport as well as any of us. One or two of the young men who did not volunteer to take the bath, were plunged headlong into the stream by those who did.

Leaving the workers to change their dripping garments, we preceded them into a grove at a short distance, to prepare for our lunch, to which all contributed. Here I witnessed another Western expedient: a large wagon-box was lifted from its place and reversed upon the ground, making an excellent table, which was soon covered with clean table linen, and a great variety of biscuits, cakes, pies, cheese, cold meats, &c., and of a quality to suit even the fastidious appetite of Horace Greeley himself—for we boast of cooks in this neighborhood who know how to make sweet bread, and boil potatoes. After we all had refreshed ourselves, we prepared to gather our plums, which grow spontaneously in the woods, or "timber," as it is here called; after which we separated to go to our several homes. Viola.

Clay, Washington Co., Iowa.

THE WIFE'S INFLUENCE.

Wives and daughters, strive to make your home a cheerful and happy one; do all you can to make it comfortable and pleasant. When the husband and father returns weary from his labor, O then remember, if you feel for his happiness, that it is you, and you alone, who can soften and subdue the care-worn features, can calm the ruffled brow, lighten his countenance with a smile, drive from his bosom the cares of the day, and give new life and animation to his dejected spirits, burying the fatigues of the day in the tide of love and respect. You have the power to make his home pleasant and attractive. 'Tis your smile that sheds a gleam of joy and contentment through his household; or 'tis your frown that darkens his prospects, dampens his brow, makes his home unpleasant and unattractive, destroys the charm of rural life, and drives him from his home, to spend his evenings elsewhere.

And sisters, fail not to exert your influence (which is great) in keeping your brothers at home. Strive to amuse them, and thus keep them from spending their time in the bar room, imbibing habits of dissipation, which grow upon them—which habits, once formed, are hard to shun. It is our opinion, that if you felt the interest in your brothers you should feel, there would not be so many farmers' sons seeking employment in the city. W.

HOME INFLUENCE.

Messrs. Editors:—Having seen an article in your valuable agricultural magazine respecting the encouragement to be given to the sons of landholders who labor upon the farm, I must concur in the opinion broached by a farmer's sensible wife, that the occupation of a farmer is of a most manly and honorable character, and that every possible comfort ought to be afforded them after enduring the fatigue and labor of the day. Mothers and daughters ought to *vie with each other* in arousing every latent energy to entertain and interest them, so that, in long evenings and inclement weather, they may enjoy the leisure and freedom from toil which the city clerks and mechanics *invariably sigh for*. I have known many families where social happiness is enjoyed, in which the mothers and sisters of such worthy young men

have read aloud to them biography, travels or history, when they have been *too weary to read themselves*, or, by the sweet strains of music, have softened, refined and animated their feelings. Oh, let there be as much emulation shown by American mothers and sisters to *solace* and *amuse* their partners and sons, to mental actions, as the Spartan matrons showed to stimulate *their* sons to the highest execution at the Olympic games. There will not *then* be so many sons wandering to the *Far West* for employment, and leaving the family homestead to be managed by the hands of strangers; all that roughness and uncouth behaviour, so often attributed to the farmer, will be done away, and in its place will be the utmost genial courtesy, and refinement of mind and manners. The longer I live, the *more I see* how *much* depends upon wives and daughters—their *domestic* kindness promoting intelligence, as well as virtuous actions and industry.

A Mother.

Ogden, N. Y.

"The Homestead."—How many associations cluster around this word, yet how few of the farms are owned by the sons or grandsons of those who cleared them of their forests. I wish not for the laws of some countries to entail the landed estate to the oldest son, but there should be enough veneration in every child to desire the possession of the homestead. But as only one can have it, it should be the one who means sacredly to keep it, because it was the home of his forefathers. I am in favor of small farms—and many of the old homesteads are much too large; divide them, and thereby render them doubly valuable with improvements. Never be afraid to plant a tree, for fear you cannot eat *all* the fruit yourself. Make permanent fixtures, and bring up your children, by *example*, to so love the homestead that nothing would be thought a worse calamity than to have it pass out of the family.

A Farmer's Wife.

ORIGINAL DOMESTIC RECEIPTS.

Strawberry Jelly.—Take of the juice of strawberries, four pounds. Add two pounds sugar, and boil down.

Apple Jelly.—Take of strained apple juice, four pounds; sugar, two pounds. Boil down.

Currant Jelly.—Mash, and strain the currants through a cloth. To one pint of the juice, add one pound of sugar, and boil. The time for boiling will depend upon the quality of sugar used. If loaf, two minutes is sufficient; if an inferior quality, containing moisture, is used, from two to twenty minutes. Jelly will not always seem hard on first cooling; but if it forms over the top and around the sides of the dish, it will be hard enough in a day or two.

Currant Jam.—Take of the quantity of fruit required, one-half, from which squeeze the juice. Add the remainder of the fruit to the juice, and, with an equal weight of sugar, boil twenty minutes.

To Preserve Currants.—To a pound of fruit, add a pound of sugar (cold). When sufficient juice is extracted to prevent them from burning, put them over the fire, and stew until they are cooked through. Put them away in tumblers, with paper pasted over them.

Currant Wine.—To each quart of juice, (pressed out cold,) add three pounds fine loaf sugar, and as much water as will make a gallon. Fill the cask with this mixture, and permit it to work. Draw it off the same as cider, and bottle. Put in no spirits. Wine made in this way cannot be beaten for mildness and agreeableness. We have some five years old.

Black Currant Wine.—Pick the currants when fully ripe, and squeeze the juice from them. To one gallon of juice, add six quarts of water; and to each gallon of this mixture, add nine ounces of sugar. Then strain, and put into a ventilated cask until the fermentation is passed, when it may be corked tight, and, as it improves by age, it may stand upon the lees for years, unless sooner called for.

Pickled Tomatoes.—Take small, smooth tomatoes, not very ripe; scald them until the skin will slip off easily, and sprinkle salt over them. After they have stood twenty-four hours, drain off the juice, and pour on a boiling hot pickle, composed of one pound of sugar to every quart of vinegar, and two tea-spoonsful, each, of cinnamon and cloves. Drain off the liquid, scald it, and pour it on them again, every two days for a week, and they will require no further care.

Tomato Catsup.—Take one-half bushel of tomatoes, scald them, and press them through a common seive. Boil them down one-half; then add two table-spoonsful of salt, one of black pepper, one tea-spoonful of cayenne pepper, one-half of cloves, one-half of cinnamon, and one-half of mace. Mix well, and add one tea-cupful of vinegar. Bottle and seal, and set in a cool place. Preserved in this way, they retain their natural flavor.

To Preserve Cherries.—Add to the cherries an equal weight of nice loaf sugar. Melt the sugar with the fruit, taking care not to boil. After the sugar is melted, let them stand in a hot place for three hours; then pour out in soup plates, cover them with a thin cloth, and set in the sun for several days. By preserving this way, the fruit retains its natural flavor and color, and will keep the year round.

To Preserve Strawberries.—To one pound of strawberries, add one pound of sugar. Put them into a preserving kettle, and let them remain until warm, so that the sugar will dissolve. Then seal them in glass jars, and bury them in sand. By this method, their flavor is entirely preserved.

To Seal Preserves.—Beat the white of an egg; take good white paper, (tissue is best,) cut it the size you require, and dip it in the egg, wetting both sides. Cover your jars or tumblers, carefully pressing down the edges of the paper. When dry, it will be as tight as a drum-head.

To Remove Fruit Stains.—Let the stained part of the cloth imbibe a little water, without dipping. Hold the part over a lighted common brimstone match, at a proper distance. The sulphurous gas which is discharged by burning the match soon causes the spots to disappear.

Indian Bread.—Two quarts sweet milk, eight cups Indian meal, four cups flour, one cup molasses, one tea-spoonful saleratus, and one of salt. Bake three hours in a slow oven.

Johnny Cake.—One pint buttermilk, one cup of cream, one egg, a little flour and soda; thicken with Indian meal. Add a little salt, and bake.

Editor's Table.

State Fairs for 1857.

Ohio,	Cincinnati,	September 15—18.
Canada East,	Montreal,	September 16—18.
Illinois,	Peoria,	September 21—26.
Pennsylvania,		Sept. 29 to Oct. 2.
Wisconsin,	Janesville,	Sept. 29 to Oct. 2.
New Jersey,	New Brunswick,	Sept. 29 to Oct. 2.
Canada West,	Brantford,	Sept. 29 to Oct. 2.
Vermont,	Montpelier,	Sept. 30 to Oct. 2.
United States,	Louisville, Ky.,	October 1—6.
Indiana,	Indianapolis,	October 4—10.
New York,	Buffalo,	October 6—9.
Iowa,	Muscatine,	October 6—9.
Michigan,	Detroit,	
New Hampshire,	Concord,	October 7—9.
Kentucky,	Henderson,	October 12—16.
Connecticut,	Bridgeport,	October 13—16.
East Tennessee,	Knoxville,	October 20—23.
Massachusetts,	Boston,	October 20—24.
Maryland,	Baltimore,	October 21—25.
West Tennessee,	Jackson,	October 27—30.
Alabama,	Montgomery,	October 27—30.
Virginia,		October 28—31.

Premiums for Short Essays.

Several of our correspondents have acceded to our request to name subjects for short essays. We give them below, and offer a book or books, of the value of one dollar, for the best essay on any of the following subjects:

For the best answer to the question, "Why do so few Farmers write for Agricultural Papers?"

For the best answer to the question, "Why is Farming considered by many a Degrading Vocation?"

On the Advantages of Agricultural Schools.

On the best time for Cutting the various Grasses for Fodder.

On the best time for Cutting the various kinds of Grain.

On the best time to Cut Timber for Building and Fencing Purposes.

On the Propriety of Agricultural Societies offering Premiums to Practical Farmers for the Best Essays on various Agricultural Subjects.

On the Benefits to be derived from Competition for the Premiums offered for Short Essays by the *Genesee Farmer*.

For the best essay detailing Experiments in the use of Muck applied Unmixed to the Soil.

On the use of Muck in Composts, and as Litter for Stables and Yards.

On the best method of Seeding Land to Timothy or Herd's Grass.

On the Management of Calves.

On the best means of Escaping Injury from Drouth.

On the Management of Barn-yard Fowls.

For the best answer to the question, "Should Farmers' Wives be Educated?"

For the best answer to the question, "Is it Proper for Ladies to assist in the Garden?"

On the Cultivation of the Chinese Sugar Cane.

On the Management of Dwarf Fruit Trees.

On the Cultivation and Management of Tobacco.

For the best answer to the question, "How can Fathers render Farm Life Attractive to their Sons?"

For the best answer to the question, "Is it desirable to Plant Fruit Trees in the Highway?"

For the best answer to the question, "How much Education, and what kind, do Farmers need?"

For the best answer to the question, "Is the Raising of Barley to be converted into Beer a Proper Employmnt for Temperance Men?"

For the best answer to the question, "How can Setting Hens be taught to forsake the lazy habit?"

The essays should not exceed one page of the *Genesee Farmer*—say eight pages of foolscap—and must be received on or before the first of September, so that they can appear in the October number. We shall be glad if our readers will furnish us more subjects.

Molasses from the Chinese Sugar Cane.—Mr. Isaac H. Corwin, of Newark, Wayne Co., has shown us a sample of molasses made last year from the Chinese sugar cane. It is a very superior article, of agreeable flavor, and well calculated to supersede ordinary syrup. Mr. C. had but twenty-seven hills of sugar cane. It was planted the first of June, and cut about the first of October, before it was ripe. He pressed the stalks between a pair of rollers, such as blacksmiths use in bending tire. The juice was strained, a little milk added, and then boiled down, and the scum removed as it arose to the surface. From three to five quarts of juice gave one of molasses.

National Trial of Reapers and Mowers.—A great Trial of Reaping and Mowing Machines will be held the latter part of this month near Syracuse, N. Y., under the auspices of the U. S. Ag. Society. We learn from President Wilder that 24 machines had been entered up to June 4th. The precise time of the trial will be announced as soon as it can be ascertained when the crops will be ready for harvest. The crowded state of our columns forbids farther notice; full particulars can be obtained by addressing H. S. Olcott, Mount Vernon, N. Y.

Economy of Mowing Machines.—The editor of the Agricultural Department of the *New York Observer*, says that last season he made a fair test of the relative economy of cutting hay with the scythe and with the mowing machine. Having marked off parallel strips of standing grass of the same dimensions, a driver and team, with one of Hallenback's mowers, commenced in one, while six good mowers made their best efforts on the other. The machine finished its acre some minutes first. That cut by the mowing machine was beautifully and uniformly spread. It required two persons to spread that cut by hand as fast as mowed.

More Good Stock for the West.—We learn from our English exchanges that the Illinois Cattle Importing Association have recently made extensive purchases of cattle, sheep and pigs from some of the most celebrated breeders of Great Britain. They were shipped at Liverpool for Philadelphia on the 20th of May, and we hope to hear of their safe arrival in a few days. The *Liverpool Daily Post* speaks of this shipment as "the most valuable exportation of breeding stock ever sent from Liverpool." It consists of 32 head of Short-horn cattle, 3 horses, 25 sheep, and 35 pigs. It is said that the cost of these 95 animals, including freight and forage to Philadelphia, will not be less than $40,000.

INSTINCT OF PIGEONS.—On the 6th or 7th of October, 1850, Sir JOHN ROSS dispatched a young pair of pigeons from Assistance Bay, a little to the west of Wellington Sound, and on the 18th of October a pigeon made its appearance at the dovecot in Ayrshire, from whence Sir JOHN had the two pairs of pigeons which he took out. The distance direct between the two places is about 2,000 miles. The dovecot was under repair at this time, and the pigeons belonging to it had been removed, but the servants of the house were struck with the appearance and motions of this stranger. After a short stay it went to the pigeon-house of a neighboring proprietor, where it was caught and sent back to the lady who originally owned it. She at once recognised it as one of those which she had given to Sir JOHN ROSS: but to put the matter to the test, it was carried to the pigeon-house, when, out of many niches, it directly went to the one in which it had been hatched. No doubt remained in the mind of the lady of the identity of the bird. By what extraordinary power did this bird find its way, and by what route did it come?

PROLIFIC GOOSE.—The *Boston Cultivator* states that "DR. EBEN WIGHT, of Dedham, Mass., has a goose—a cross of the Bremen and large Chinese (sometimes called the Hong Kong)—which, from the middle of February to the middle of May last, laid sixty-five eggs. She laid about the same number last year. The greater portion were disposed of by being set under hens and other geese, but when the goose in question showed a disposition to attend to maternal duties, the proper number of eggs were allowed her, and in due time she brought out her annual brood. It should be noticed that this goose is a hybrid between two very distinct varieties. Some naturalists have even contended that the stock to which the male parent of this specimen belongs, is a different *species* from other geese. We have not room to go into the *merits* of the case, but will simply remark that several members of the same brood as the goose mentioned, have shown the same prolific character, and we offer the fact for the consideration of persons who hold that crossing tends to sterility."

"SCIENTIFIC."—The *Plough, the Loom and the Anvil* has a "Scientific" Department. The editor, Prof. NASH, in publishing an article on guano, says: "We place it under the head of Scientific, as it illustrates the science of *spunging*, and *that* is certainly a great science." We are sometimes asked, "Is the editor of the —— —— as great a scientific man as he pretends?" We are always glad to speak well of our contemporaries, and, taking Prof. NASH's view of the subject, shall for the future answer *yes*,—as we can do so with a good conscience.

DESIGNS FOR HOUSES, BARNS, &c.—We shall feel greatly obliged to any of our readers who will send us designs for farm houses, barns, &c., especially of those which have been erected and which prove convenient. Let us have a sketch of the outside—no matter if it is a rough one, we can get it drawn over—and an accurate ground plan, with a full and detailed description of the interior arrangements, with such hints in regard to the construction as may prove useful to those who may wish to build from the design.

SAGACITY OF RATS.—The *London Quarterly Review*, speaking of the sagacity of rats, says: "Incredible as the story may appear of their removing hens' eggs by one fellow lying on his back and grasping tightly his ovoid burden with his paws, while his comrades drag him away by the tail, we have no reason to disbelieve it, knowing as we do that they will carry eggs from the bottom to the top of the house, lifting them from stair to stair, the first pushing them on its hind, and the second lifting them with its fore legs. They will extract the cotton from a flask of Florence oil, dipping in their long tails, and repeating the manœuvre until they had consumed every drop. We have found lumps of sugar in deep drawers at a distance of thirty feet from the place where the petty larceny was committed; and a friend saw a rat mount a table on which a drum of figs was placed, and straightway tip it over, scattering its contents on the floor beneath, where a score of his expectant brethren sat watching for the windfall."

PORTUGUESE CATTLE.—The King of Portugal has recently sent over to England a present of cattle of a very peculiar breed to Queen VICTORIA, consisting of a bull, two heifers, and a bull calf. The animals are of the most perfect symmetry, and very diminutive, standing scarcely forty inches high. They are of a dun color, and in fine condition. The cows are very docile; but the bull, on being driven from the station to Prince ALBERT'S model farm at Frogmore, where they are now installed, exhibited a disposition rather the reverse of that of his companions, by tossing an unfortunate donkey about his own size, which happened to come in his way. These Lilliputian animals much resemble the Alderney or Jersey breed, but appear to be scarcely more than half the size.

THE PLOUGH, THE LOOM AND THE ANVIL.—This excellent monthly commences a new volume this month. The price is $2 per annum, but the publishers say that "for the purpose of bringing the future volumes into accordance with the year, the tenth volume will comprise but six months, ending with January, 1858. It will be complete in itself, with title page and index; will contain 400 pages, (half the usual number,) and will be sold at $1 to single subscribers, and 75 cents each to clubs of four." The *P., L. and A.* is edited by Prof. J. A. NASH and M. P. PARISH, and is an instructive, interesting and reliable agricultural journal. Give it a trial for six months.

CURE FOR RINGBONE.—The editor of the *London Field* says there is nothing so likely to cure ringbone as an ointment composed of two drachms of biniodide of mercury and one ounce of lard. On the following day apply soft soap, rubbing it on gently with the hand; leave it there until it falls off itself. Be sure to purchase the biniodide at a first-rate druggist's, and keep it in a glass-stopped bottle.

SHEEP FOR CALIFORNIA.—A. AUSTIN, of California, has purchased four French Merino sheep—two rams and two ewes—from J. D. PATTERSON, Westfield, Chautauque Co., N. Y. They were taken out in the last California steamer from New York. We hope to hear of their safe arrival. The price said to have been paid for them was $1,400.

NOTES FROM MINNESOTA.—We have had a cold, backward spring. The farmers have but just completed their seeding. Our soil, however, is so warm and quick that we expect good crops. But little fall wheat was sown; that looks well. The spring wheat already shades the ground, and grows finely. Considerable of the corn is already up, but some has only been planted for a few days. The Dent corn is mostly raised here; I have planted a variety of the Dent, and some of the Dutton. More oats have been sown this spring than last, but not enough to supply the home consumption. They do well here, sixty to eighty bushels per acre being a common crop. All of the grains are scarce here now. Wheat, corn, oats and potatoes are each selling for over one dollar per bushel. Our spring wheat makes as good and as white flour as the best Genesee ever did. Our wives make snow-white bread with it. I would like to give some of the Monroe county people a sample.

It is true that our winters are cold, but the summers and autumns are delightful. E. HODGES.

Marion, Olmsted Co., Minnesota, May 30.

APPLYING MANURE ON THE SURFACE IN THE AUTUMN.—Our esteemed correspondent, JOHN JOHNSTON, in a private letter, says: "I like your friend B., of Niagara Co. I am much pleased that he is going to try my plan of manuring. I know fall manuring will have a hard struggle to get into use; but it is like any other improvement that does not correspond with the notions of old fogies, theorists, and of professors of agricultural science, falsely so called. I would rather have two loads of manure applied to the surface in the fall, than five plowed under."

A PROLIFIC SOW.—I have a sow, three years old last March, which, in nineteen months, or a little more than a year and a half, has dropped 70 pigs, of which 34 have lived, as follows: In September, 1855, she had a litter of 13, of which 10 lived; in April, 1856, a litter of 23, of which 4 lived; in Septemqer, 1856, a litter of 12, of which 10 lived; in April, 1857, a litter of 22, of which 10 lived; and she is now with pig to drop the last of August. Her pigs are large, healthy and vigorous. R. HARRIS.

Jackson, Pa.

PROFITS OF RHUBARB CULTURE.—The *Boston Cultivator* is informed that a noted cultivator on Long Island sold this season from four acres of rhubarb, two hundred dollars worth per day, for four weeks, and would probably average a hundred dollars a day for two weeks more. The variety was the Linnean, which, we believe, originated in England.

NEW ADVERTISEMENTS.—H. E. HOOKER & Co. offer Quince Stocks for sale, at low rates; ROBERT SEARS wants Agents to sell his Pictorial Bible; DUNHAM & WOOD can supply thorough-bred Stock; T. J. PATERSON will supply all orders for MCCORMICK'S celebrated Reaping and Mowing Machines; and C. H. SEYMOUR will furnish one of the best Seed Drills that we are acquainted with.

THE *Boston Cultivator* says it has been observed that timber exposed to the elements in the South, will decay two years earlier than the same kind of timber equally exposed in the Northern States.

A GOOD COW.—The *Rural Intelligencer*, published at Augusta, Maine, says there is a cow owned by Capt. PAUL BROWN, of that city, which, from May 1, 1856, to May 1, 1857, supplied his family of three persons with all the butter, cream and milk wanted for the year, and enabled him, in addition, to sell *four hundred and twenty pounds of butter*. Bro. DREW, of the *Rural*, asks, "Who among the great breeders in Kentucky, Ohio, Pennsylvania, New York or Massachusetts, can produce a better cow than that?" The cow had no extra feed.

DR. DADD recommends equal parts of salt, sulphur and charcoal for the hog cholera. A table-spoonful per day should be given in the food.

Inquiries and Answers.

(G. A. F., Virginia.) EGYPTIAN CLOVER.—We are not aware that this clover has been tried in this country. If it has, we should be glad to hear from those who have had experience with it. In Egypt it is universally cultivated, and forms the best and principal fodder for cattle. It is an annual. It is sown when the ground is wet, either from artificial irrigation or from the overflowing of the Nile. When cut for fodder or for soiling, two or three crops are obtained in a season, from eighteen inches to two feet high. When raised for seed, only one crop is obtained, and the usual practice is to sow it with wheat, harvest and thresh both together, and separate the clover seed by means of fine seives. Some years ago this clover attracted much attention in Great Britain, and in 1833 the Messrs. LAWSON, of Edinburgh, imported a considerable quantity of seed, but, on trial, it was found less productive than had been anticipated. In the warmer sections of this country it might prove valuable on our river bottoms, and we would advise you to give it a trial in Virginia.

(J. R.) Your suggestion is not new. The fact that vessels engaged in the lime trade lasted a long time has been observed, and the experiment of impregnating wood with lime-water, in order to increase its durability, has been tried; but, according to DUPIN, (*Ann. de Chimie*, t. xvii., p. 286,) the result did not answer expectation. In fact, the timber treated with lime did not last the usual time.

(S. K., C. W.) Mr. ADAMS simply quoted the phrase "Benighted Canadians" from the communication of one of our *Canadian* correspondents in the preceding number of the *Farmer*. Mr. A., we are certain, did not intend to give offence.

HOW SHOULD LIME BE APPLIED.—I have a farm of good land, part beech and sugar tree, and mixed with walnut, cherry, buckeye, &c., in the richer parts. I think, from short grain crops, and other indications, that there is a deficiency of lime in the soil. I cannot obtain lime at a less distance than thirty miles, at twelve and a half cents per bushel, or pay at Mansfield, to which place it is brought by railroad, twenty-five cents. I wish to apply a few loads of lime to a field or two this fall, and if I find it pays, lime in succession all, but do not know how best to apply it. Some of my neighbors talk of scattering a load or two on the manure in the barn-yard; but I think I have read somewhere that that mode of applying it causes a loss by chemical process, (of ammonia, perhaps,—at any rate, that it was injurious. If you have any knowledge on the subject, will you please inform me, in the *Genesee*

Farmer, the best mode of applying lime to such land, and also the quantity necessary and that will pay? If not, a few remarks from you in the *Farmer* will elicit from some of your intelligent correspondents the desired information.

I have a small farm where I live, near Mansfield, different from the other, being high upland, and good. The timber has been chestnut and oak, mixed with poplar, sugar and black and white walnut. I wish to apply lime to a field of five acres, which I propose putting in wheat this fall. This farm has been worked out in corn and grain, till the constituents of grain are exhausted. On coming to it, a year ago, I sowed two fields with clover, but the drouth destroyed it; and I expect that clovering, with the addition of lime, will renovate the soil, and I wish to do it as quickly as possible. The prompt modern fertilizers—guano, poudrette, &c.—are of course out of the question here, and I have not heard of anything but barn-yard manure being applied anywhere about here, except a small amount of plaster. CHARLES PALMER.—*Mansfield, Ohio.*

We hope some of our correspondents will give us their experience on the use of lime. If we had such a farm, thirty miles from a lime-kiln, we should, as our friend proposes, try it at first on a small piece of land. At the same time, we should try, by good tillage and the use of plaster and ashes, to raise a crop of clover. We think our correspondent can do this without lime; and if you can raise clover, you can raise wheat. We place a high value on lime as a manure, but there are circumstances when its use is not profitable—when, in other words, the same object may be attained in a cheaper way. Since the introduction of guano into England, the use of lime has been discontinued, to a very great extent. The principal value of lime is not in supplying *lime* to the plant, but in liberating ammonia, potash, &c., from the soil, and it is quite probable that our correspondent can provide these substitutes in a cheaper form. Still, we are not certain on this point, and should be glad to have the opinion of others on this important subject.

SIX GOOD SHADE TREES.—I was much pleased with your article on Evergreens, in the last number of the *Farmer*. I like your idea of naming half a dozen of the best kinds; and the object of my present writing is to request you to name six of the best deciduous trees for ornamental planting and for shade. G. R.—*Rush, N. Y.*

We would gladly comply with our correspondent's request; but there are so many circumstances to be taken into consideration, that it is very difficult to answer the question with any degree of satisfaction. On repeating the question to a friend whom we consider one of our best authorities in such matters, he named the following: Hard Maple, Silver-leaved Maple, Elm, Oak, Horse Chestnut, White-barked Birch. Some, he thinks, may object to the last, who have only seen poor specimens, but, when well grown, it is a beautiful tree for the lawn. All these trees are undoubtedly good—perhaps the best; but we do not like to omit the Linden—the European, especially. Where the borers do not trouble it, we should also plant the Locust, and the Mountain Ash.

SKUNK.—If D., of Gates, has not rid himself from the effluvia of that "striped woodchuck," the best means for so doing is as follows: Dig a place in the ground sufficiently large to receive the clothes when spread out, say four inches deep; wet them thoroughly, spread them in, cover with dirt, and leave them for five or six days. J. C. ADAMS.—*Seymour, N. Y.*

WILL you throw some light on the following queries?

1. In order to effectually protect an orchard from winds, how wide a belt of trees is necessary?
2. How should they be planted—in rows, or irregularly, as they grow in the forest—and how thick?
3. In a high, dry, gravelly and bleak situation, what kind will make the *quickest* and *most effectual* protection?
4. Is there any tree that combines the double properties of shelter and hedge, or that will protect from winds, domestic animals and *thieves* at the same time, and that grows quickly, and is hardy?
5. How long does it require before it affords ample protection? HORTICULTURIST.—*Auburn, Pa.*

I SHOULD be obliged if some of your correspondents would answer the following questions: (1.) Is buckwheat straw worth anything for manure? (2.) What is the best remedy for ringbone on horses? also (3) for the heaves? (4.) Is there any other way to prevent a sow from having pigs, except the common, murdering way of cutting? W. L.

WILL some of the correspondents of your valuable paper inform me of the best time to cut chestnut timber for rails and posts, so as to have them durable? R. HARRIS.—*Jackson, Pa.*

ADVERTISEMENTS,

To secure insertion in the FARMER, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. TERMS—Two Dollars for every hundred words, each insertion, PAID IN ADVANCE.

DUNHAM & WOOD,

ÆTNA, TOMPKINS COUNTY, N. Y.,

BREEDERS OF

PURE SHORT HORNS—of choice pedigrees.
PURE LEICESTER SWINE—fine large hogs.
PURE BERKSHIRE SWINE—medium sized hogs.
PURE DOMESTIC FOWLS—of choice varieties.
PURE WILD TURKEYS, domesticated—valuable Farm and Park ornaments.

☞ Choice single animals, and breeding pairs, supplied.
July 1.—1t.*

GRAIN DRILLS.

SEYMOUR'S GRAIN DRILL, capable of sowing all kinds of Grain, from Peas to Grass Seed, and also fine fertilizers, either broadcast or in drills; and SEYMOUR'S GRAIN DRILL FOR ONE HORSE, arranged and completely adapted to drilling among Corn while it stands on the ground as it grew; also, SEYMOUR'S BROADCAST SOWING MACHINE, capable of sowing all kinds of Grain and Seed, and all fine fertilizers, broadcast; are all supplied to order, by C. H. SEYMOUR. Those wishing further information, will receive our Circular, and a prompt reply to all inquiries, by addressing C. H. SEYMOUR, Manufacturer, or P. SEYMOUR, Inventor,
July 1.—1t. East Bloomfield, Ontario County, N. Y.

THE BEST BOOKS FOR AGENTS.

EMPLOYMENT FOR THE YEAR.—PLEASE TO READ THIS.—AGENTS WANTED.—All persons in want of employment will at once receive our catalogue of books for the New Year, prepaid, by forwarding us their address. Particular attention is requested to the liberal offers we make to all persons engaging in the sale of our large type Quarto Pictorial Family Bible, with about 1000 engravings. Our books are sold only by canvassers, and are well known to be the most saleable.

NOTICE TO AGENTS.—The season for selling books has now arrived, and we feel assured that our Illustrated Volumes are among the best adapted for general circulation, especially the Pictorial Family Bible. We wish competent Agents in all parts of the country to engage in the sale of it immediately. Send for a sample copy, and try it among your friends. Those who have not the means, or do not wish to order a supply of books to commence with, can send us $6, (in a registered letter,) carefully enclosed in a whole sheet of writing paper, and we will at once forward, prepaid, by express, to any central point, a copy of the Pictorial Bible, with a bound subscription book, and canvassing circulars, for securing the names of subscribers. With these he can get up a list, and afterwards order the Bibles to supply them with. Please address, postpaid, ROBERT SEARS, Publisher,
July 1.—1t. No. 181 William street, New York.

McCORMICK'S REAPING AND MOWING MACHINE.

THERE is no Machine of the kind as simple in its construction, as strongly built and durable, that requires as little repairing, or that will perform as much with less horse power. Purchasers who see the Machine will be readily convinced of this. No other Machine has the wrought iron finger beam and malliable iron fingers, which add greatly to its strength and durability. I consider it perfect as a Reaper and Mower, having the advantage of a sickle edge, that requires but little grinding, the side delivery and reel—cutting a wider swath with ease, and much faster, than most other Machines. It took the *Council Medal at the World's Fair at London, and the GRAND MEDAL OF HONOR at the Great French Exhibition at Paris, and the only First Class Medal awarded to any Agricultural Implement at either place.* Manny's Machine and Atkins' Self-raker stood in the Third and Fourth Classes, and received Silver Medals only. After the repeated trials and triumph of my Machine, the Emperor purchased it. As a test of my confidence of the greater simplicity and superiority of the Machine, I will let responsible applicants take it on trial with any other, and keep and pay only for the one they prefer; the Machine in such case to be tested as a Reaper and Mower by the farmer, in the absence of agents and mechanics. The unparalleled success of the Machine, both at home and abroad, makes an extended notice of it unnecessary, and I will only refer to my handbills for a more particular account of it. The broad warrantee which permits a trial of it, is a sure guarantee that it is what it is recommended to be.

Machines will be forwarded to any part of New York and the Canadas, if ordered early and in season of THOS. J. PATERSON, General Agent, at Rochester (office at the National Hotel). Price of Reaper and Mower, $150; $50 payable on delivery, and the balance, with interest, in December; or $145 cash. Machines subject to freight from Buffalo.

☞ Local Agents wanted, to sell in the unoccupied districts.

C. H. McCORMICK,
Rochester, N. Y., July 1.—1t. By THOS. J. PATERSON.

ONE DOLLAR A YEAR.—CIRCULATION OVER 100,000 COPIES WEEKLY.

25 WITNESSES;
OR,
THE FORGER CONVICTED.

JOHN S. DYE IS THE AUTHOR,

Who has had ten years' experience as a Banker and Publisher, and Author of

A Series of Lectures at the Broadway Tabernacle,

When, for ten successive nights, over

☞ 50,000 PEOPLE ☜

Greeted him with Rounds of Applause, while he exhibited the manner in which Counterfeiters execute their Frauds, and the Surest and Shortest Means of Detecting them!

The Bank Note Engravers all say that he is the Greatest Judge of Paper Money living.

Greatest Discovery of the Present Century

FOR

DETECTING COUNTERFEIT BANK NOTES,

Describing every Genuine Bill in Existence, and Exhibiting at a glance every Counterfeit in Circulation!!

Arranged so admirably that REFERENCE IS EASY, and DETECTION INSTANTANEOUS.

☞ NO INDEX TO EXAMINE! NO PAGES TO HUNT UP! ☜

But so simplified and arranged that the Merchant, Banker and Business Man can see all *at a glance.*

English, French and German.

Thus each may read the same in his own Native Tongue.

Most Perfect Bank Note List Published.

Also,

A List of all the Private Bankers in America.

A Complete Summary of the FINANCE OF EUROPE AND AMERICA will be published in each edition, together with all the Important NEWS OF THE DAY. Also,

A Series of Tales

From an Old Manuscript found in the East. It furnishes the Most Complete History of

ORIENTAL LIFE,

Describing the Most Perplexing Positions in which the Ladies and Gentlemen of that Country have been so often found. These Stories will continue throughout the whole year, and will prove the Most Entertaining ever offered to the Public.

☞ Furnished Weekly to Subscribers only, at $1 a year. All letters must be addressed to JOHN S. DYE, Broker,
Publisher and Proprietor, 70 Wall street, New York.
May 1, 1857.—1y.

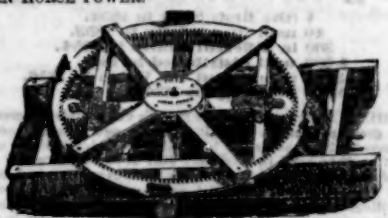
ROCHESTER AGRICULTURAL WORKS.

ATTENTION, THRESHERS!

PITTS' PREMIUM SEPARATORS, & DOUBLE PINION HORSE POWERS.

The above cut is a representation of the justly celebrated PITTS' MACHINE FOR THRESHING AND CLEANING GRAIN at one operation. It is the best Machine for threshing and cleaning grain in existence.

The following cut represents PITTS' DOUBLE PINION EIGHT OR TEN HORSE POWER.



☞ As a superior and every way reliable Horse Power, the above stands unrivaled.

We call attention to the fact that we are now manufacturing the above Machines at Rochester, N. Y., in a more substantial and durable manner, and of a larger capacity than any hitherto built in this city, having all the latest improvements made by John A. Pitts.

We can furnish the latest and best all iron Power, for eight, ten or less number of horses.

We invite all who intend purchasing to examine our machines; they will more than equal the best expectations of the public.

FARMERS, YOUR ATTENTION IS ASKED TO

HYDE & WRIGHT'S PATENT HORSE HOE OR CULTIVATOR PLOW,

Designed and better adapted than any other implement for hoeing Corn, Broom Corn, Potatoes, Cotton, or any other crop requiring the use of the Horse or Hand Hoe. It has proved itself the most valuable implement yet invented for the purpose intended. It has been in use in Western New York for the past four years—hundreds of them having been sold on trial, and none returned. Its great utility has been demonstrated in the fact that one day to the acre, with a man and horse, is all the expense of cultivating and hoeing a field of corn for the season. If used as directed, hand hoeing, in nine cases out of ten, may be entirely dispensed with. We have numerous certificates of the most satisfactory character, which we would be happy to show the public.

Farmers may rely on realizing their best expectations from the use of the Horse Hoe. Price, $8; if ground and polished, $8.50. No farmer should be without one. They are having an unlimited sale. Sold at wholesale and retail.

ROCHESTER CUTTING BOX.

All who are in want of a Feed Cutter, adapted equally well to the cutting of all kinds of fodder, will find our Cutting Box in all respects to answer their wants.

IRON GANG PLOW

We are Agents for the sale of HILDRETH'S GANG PLOW which has superior advantages over every other Gang Plow Price, $25.

CERTIFICATE.

Hildreth's Gang Plow is one of the best implements I have ever had on my farm. I have used it on corn and oat stubble, and on potato ground for putting in oats and barley. The wheels regulate the depth so nicely that the seed is all covered, and at a uniform depth. I think my crop was nearly doubled from what it would have been if put in with a drag. The wheels make it an easy draft for a team, and it requires no holding. For the above kind of work, I think there is no implement equal to it.

JONATHAN WADHAMS, East Clarkson, N. Y.

☞ We shall be happy to impart any further information that may be desired. Orders are respectfully solicited.

A. GORDON & CO.,
May 1. 68 South St. Paul street, Rochester, N. Y.